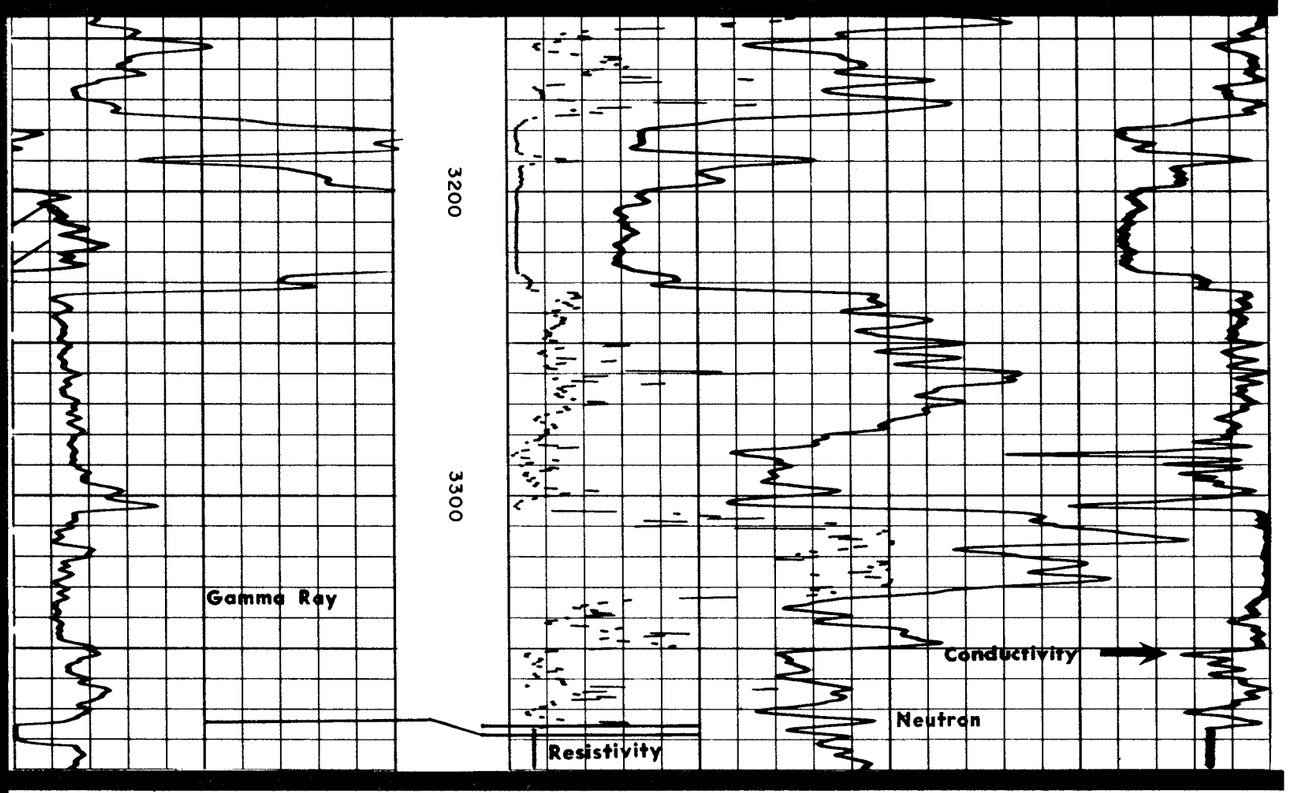
MICHIGAN'S OIL AND GAS FIELDS, 1968

ANNUAL STATISTICAL SUMMARY 10



1969 GEOLOGICAL SURVEY

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ACKNOWLEDGMENTS

The information contained in this publication results from the joint efforts of the Survey's Oil and Gas Section. It brings together under one cover many oil and gas field statistical data not usually found in any other industry or government publication. Oil and gas field data of historical and general interest are included and thus preserved herein for future reference. The summary is, therefore, a source of information most useful in evaluating Michigan's past history and future prospects as an oil and gas province. Futhermore, the gathering, maintenance, and compilation of the many statistical data contained in this summary reflects, in part, the varied functions of the Oil and Gas Section.

Current oil and gas production figures are obtained from Michigan Department of Revenue records. Gas import figures are from Michigan Public Service Commission, Gas Section, compilations. Other statistics are based upon data gathered by the Geological Survey.

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Lansing, Michigan
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MICHIGAN'S OIL AND GAS FIELDS, 1968

Introduction

In this issue of Michigan's oil and gas field statistical summary, various facets of the states petroleum exploration and development industry are cited and related, where useful, to similar statistics of the prior year. Factors such as the amount of exploratory and development drilling, the number and size of newly discovered fields and pools, and oil and gas production are useful indices which show the trend of activities from year to year.

The kinds of data listed herein are derived mainly from records received and maintained by the Geological Survey Division. The types of data reported in this summary have been treated uniformly from year to year, and reflect as near as possible the actual activities, developments, and production that should be credited to the past year, 1968.

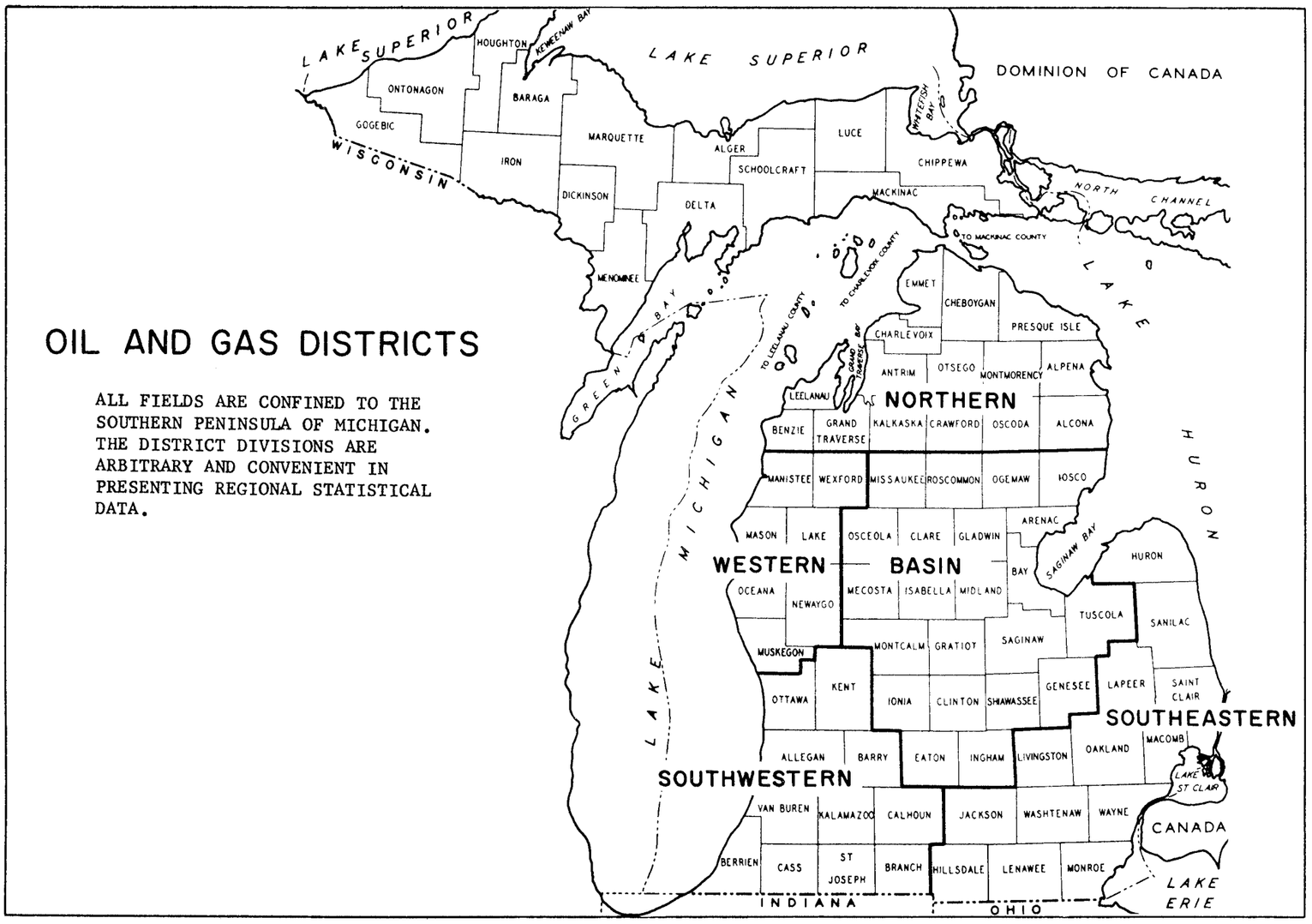
Certain figures such as the number of exploratory and development wells drilled, number of discoveries, and well classifications may differ from statistical data reported by regional or national trade journals and by commercial, petroleum industry reporting services. Differences are due to methods of gathering and reporting well drilling data. Another factor is the method of determining a cut-off date for reporting statistics on a yearly basis.

Comparison of 1968 statistics with those of 1967 shows a small but continued decline in overall oil and gas activities. The most active regions of new field exploration and field development drilling were St. Clair County and Macomb County, the northern part of the Albion-Scipio oil field trend, and in central western Michigan. The number of new field discoveries was slightly above that of 1967, but none appear to be of large size. Most of the new fields were outlined by development drilling at year's end. Oil production continued to decline a small percentage. More than 50% of it was produced from the Albion-Pulaski-Scipio fields. Gas production increased due to previously shut-in fields going on line, and an increase in gas processing facilities and production in the previously mentioned fields. The total value of the oil and gas produced during 1968 amounted to about $48,571,380 as compared with $47,820,112 in 1967.

Part 1 of this publication summarizes significant information on oil and gas field activities and related work of the Oil and Gas Section of the Geological Survey during 1968. Part 2 contains specific information on Michigan's oil and gas fields for 1968. Previous summaries contained separate tables for active or abandoned oil or gas fields. All such singular tables have been revised and consolidated into one table with all fields arranged in alphabetical order, regardless of classification or status. Part 3 contains cumulative records of importance to the petroleum industry. Data for 1968 has been included in these cumulative tables.

* * * Drilling Permits * * *

Fewer permits were issued to drill new oil or gas tests, gas storage wells, or other types than in the previous year. Part of the decrease is due to wider well spacing, the small areal extent of the fields, and a general decline in exploration activity. Of the 378 permits issued, 173 were for exploratory tests, 172 for field development wells, 27 for gas storage, and 6 for LPG storage facilities. Also, included are 4 permits which were cancelled and terminated due to failure of operators to commence drilling operations within six months from the issue date.



The geographic distribution, by district, of permits issued through a 3 year period is as follows:

DRILLING PERMITS BY DISTRICT

DISTRICT	Permits Issued		
	1966	1967	1968
Basin	79	91	88
Northern	11	11	17
Southeastern	222	178	143
Southwestern	43	72	61
Western	75	53	69
Totals	430	405	378

The higher figures for the southeastern district reflect exploration and development activity in the St. Clair-Macomb County area, and along the Albion-Pulaski-Scipio Trend. Table 1, page 6, shows the distribution of drilling permits by county. Not included in the above figures are 25 deepening permits. No geological test permits were issued in 1968. The fluctuation in permits issued for gas storage and other types of service wells over a three year span are as follows:

Service Wells	1966	1967	1968
Gas Storage		24	27
L.P.G., Wtr. Inj. Brine Disposal, etc.	7	2	9
	7	26	36

* * * WELL COMPLETIONS * * *

There were 333 new-hole exploratory and development wells completed during the year. The figure does not include gas storage reservoir wells, oil wells drilled to deeper oil or gas pools, reworks, or others not directly related to exploratory or field development drilling. Nearly 40% of the exploratory and 25% of the development wells were drilled in St. Clair and Macomb Counties. About 32% of the development well completions are credited to the Albion-Pulaski-Scipio Trend; most of them being in the Calhoun County part. More details on well completion results, by county, are shown on Table 1. The number and class of well completions according to oil and gas districts and by month in 1968 are tabulated on Table 3. The results of exploratory and development drilling covering a three-year period are summarized as follows:

EXPLORATORY AND DEVELOPMENT WELL COMPLETIONS

Year	Exploratory Wells			Development Wells			Totals
	Oil	Gas	Dry	Oil	Gas	Dry	
1966	8	3	175	49	42	111	388
1967	7	2	171	69	38	106	393
1968	9	4	151	61	8	100	333

The fluctuation of drilled footage, including deepenings, over a three-year period is as follows:

Well Class	Amount of Drilled Footage		
	1966	1967	1968
Exploratory	560,941	539,400	522,384
Development	608,386	686,672	564,827
Service	33,370	88,434	776,026*
	1,202,697	1,314,506	1,163,237

*Includes LPG, GS, Brine and water injection wells.

TABLE 1 DRILLING PERMITS AND WELL COMPLETIONS BY COUNTY, 1968 (Sheet 1 of 2)

Classification of New Hole Completions
Does not include reworked wells or old wells drilled deeper

COUNTY	OIL AND GAS PERMITS ISSUED	OIL AND GAS TESTS		RESULTS			SERVICE WELLS				TOTAL COMPLETIONS
		Exploratory	Development	Oil Wells	Gas Wells	Dry Holes	Brine	GS	Wtr. Inj.	LPG	
Allegan	6	2	2			4					4
Antrim	2	2				2					2
Arenac	1	1				1					1
Barry	1	1				1					1
Bay	1	2				2					2
Calhoun	39	1	33	11	1	22					34
Cass	1										
Clare	15	1		1				13			14
Crawford	7	1	4	4	1				2		7
Eaton	3	1				1					1
Genesee	6		5	4		1					5
Gladwin	1										
Grand Traverse	3	3				3					3
Gratiot	3	3				3					3
Hillsdale	17	9	13	5		17					22
Ionia	3	2				2					2
Iosco	1	1				1					1
Isabella	10	5	6	3		8					11
Jackson	11	4	8	1		11					12
Kalamazoo	2										
Kalkaska	2	1				1					1
Kent	3	1	2			3					3
Lake	23	4	13	10		7					17
Lapeer	3		4	4							4
Lenawee	2	1			1						1

TABLE 1 DRILLING PERMITS AND WELL COMPLETIONS BY COUNTY, 1968 (Sheet 2 of 2)

Macomb	33	26	10	1	4	31		1			37
Manistee	2	2				2					2
Mason	14	13	1	1		13					14
Mecosta	9	3	2	2		3		5			10
Midland	1	1				1					1
Missaukee	2		5	1		4					5
Montcalm	3	1	2			3					3
Muskegon	9	1	7	3		5					8
Newaygo	16	8	2	2		8					10
Oakland	1		1		1						1
Oceana	5	4	1			5					5
Ogemaw			2	1		1					2
Osceola	24	9	8	4	1	12		5			22
Ottawa	4	3				3					3
Presque Isle	3	3				3					3
Roscommon	1	1				1					1
Shiawassee	4		4	4							4
St. Clair	69	39	32	8	3	60		3			74
Van Buren	5	3	1			4					4
Washtenaw	1	1	1			2	1				3
Wayne	6									6	6
Totals 46 Counties	378	164	169	70	12	251	1	27	2	6	369

Includes 4 permits which were issued and terminated in 1968.

Brine from this well is used for dust and ice control on county roads.

* * * OIL AND GAS PRODUCTION * * *

No large oil reserves were found and developed during 1968 that reversed the general decline in annual oil production. Oil production amounted to 12,974,405 barrels as compared with 13,664,185 barrels in 1967.

Gas production increased from 33,241,640 Mcf. to 39,685,162 Mcf. in 1968. The increase is due in part to new gas fields going on line, and an increase in gas processing and gathering facilities in the Albion-Pulaski-Scipio fields.

LPG production, stripped from Michigan produced gas, amounted to about 1,885,735 barrels. The bulk of LPG production came from Albion-Pulaski-Scipio, Belle River Mills, Boyd, and Reed City gas plants. An additional 603,965 barrels were stripped from gas imported into Michigan via pipeline and processed at the Willow Run plant. See Tables 9 and 10 for further information on gas plant operations.

Oil and gas production by individual fields or pools is found in Part 2, Table 4. Annual and cumulative production by year, geologic formation, and county can be found in Part 3. See Table 2 in this section for oil and gas production by county in 1968. The following tables show oil and gas production by month and by oil and gas districts.

OIL AND GAS PRODUCTION BY DISTRICT

District	Production	
	Barrels Oil	MCF Gas
Basin	3,958,562	1,898,546
Northern	422,361	459,274
Southeastern	5,721,044	31,246,298
Southwestern	2,607,557	6,026,557
Western	264,880	54,487
Totals	12,974,404	39,685,162

OIL AND GAS PRODUCTION BY MONTH

Month	Production	
	Barrels Oil	MCF Gas
January	1,132,372	3,340,012
February	1,040,183	2,525,937
March	1,103,810	3,386,377
April	1,110,123	3,069,001
May	1,110,957	3,310,233
June	1,047,591	3,104,457
July	1,117,491	3,156,949
August	1,085,189	3,084,110
September	1,043,988	3,649,268
October	1,125,661	3,956,857
November	1,036,872	3,115,270
December	1,020,167	3,986,691
Totals	12,974,404	39,685,162

* * * OIL AND GAS VALUATION * * *

The average price paid at the wellhead for Michigan crude was $2.95 per barrel. The value of this mineral resource amounted to about $38,286,742 as compared with $39,455,290 in 1967. The average price of Michigan gas sold at the well head was $.26 per Mcf. The value of this product amounted to about $10,284,638 as compared with $8,364,822 in 1967. The value of LPG production amounted to about $3,960,043. The estimated price of LPG's, per barrel, amounted to $2.10.

* * * OIL AND GAS IMPORTS AND EXPORTS * * *

Domestic imports via pipeline from western and midwestern states amounted to 25,817,614 barrels, a decrease from the 28,853,856 barrels imported in 1967. Canadian crude oil imports via pipeline from western Canada oil fields increased from 8,407,569 barrels to 14,299,426 barrels in 1968. Total imports to Michigan refineries amounted to 40,117,040 barrels compared with 37,250,765 barrels in 1967.

1968 OIL IMPORTS (Bbls.)

	Domestic	Canadian	Total
January	2,285,055	1,297,142	3,582,197
February	1,989,241	1,227,883	3,217,124
March	1,995,582	1,388,615	3,384,197
April	1,601,504	1,565,864	3,167,368
May	1,844,695	1,351,201	3,195,896
June	2,219,837	1,364,129	3,583,966
July	2,059,953	1,212,053	3,272,006
August	1,967,121	1,405,011	3,372,132
September	2,185,535	1,395,300	3,580,835
October	2,542,616	741,365	3,283,981
November	2,957,312	642,305	3,599,617
December	2,169,163	708,558	2,877,721
Totals	25,817,614	14,299,426	40,117,040

Michigan produced crude oil exported to northern Indiana (Ft. Wayne) and Ohio (Cleveland) refineries amounted to 584,063 barrels. The 1967 export figures report in Statistical Summary 8 should have been 503,289 barrels rather than 149,463 barrels reported.

1968 OIL EXPORTS (Bbls.)

January	49,780	July	36,520
February	46,896	August	45,120
March	51,681	September	53,959
April	45,944	October	52,615
May	46,156	November	54,583
June	32,551	December	68,258

Total 584,063

Gas imports to Michigan markets and gas storage fields via pipelines, primarily from Texas, Louisiana, Oklahoma, and Kansas fields increased slightly in 1968. Compilations by the Gas Section, Michigan Public Service Commission, show gas imports of 696,781,346 Mcf. as compared with 661,345,209 Mcf. in 1967. Gas imports by month were as follows:

PIPELINE GAS IMPORTS (Mcf.)

January	42,052,490
February	38,279,574
March	53,639,331
April	63,088,810
May	67,158,538
June	69,656,110
July	71,065,176
August	71,893,001
September	64,938,589
October	61,424,427
November	48,796,640
December	64,491,664
Total	696,781,346

* * * DISCOVERY WELLS * * *

State-wide, the discovery-to-dry hole ratio for exploratory or new field wildcat wells was about 1:12 as compared with 1:20 in 1967. In St. Clair and Macomb Counties, where about 40% of the exploratory wells were drilled, the ratio was about 1:16 as compared with 1:20 in 1967.

Completion details on all discovery wells credited to 1968 are listed on pages 12 and 13. All reached total depth during the year, and most were put on production. None of the new oil discoveries appears to have an oil or gas yield greater than a Class E field as defined below. The classifications are based on potential yields as defined by the American Association of Petroleum Geologists, Committee on Statistics of Drilling.

Class A - Over 50 million barrels oil or 300 BCF gas
Class B - 25-50 million barrels oil or 150-300 BCF gas
Class C - 10-25 million barrels oil or 60-150 BCF gas
Class D - 1-10 million barrels oil or 6-60 BCF gas
Class E - 1 million barrels or less oil, or less than 6 BCF gas
Class F - Abandoned as non-profitable

TABLE 2 -- OIL AND GAS PRODUCTION BY COUNTY IN 1968

County	Barrels Oil	MCF Gas
Allegan	185,086	526,923
Arenac	252,669	---
Barry	11,888	---
Bay	308,631	---
Berrien	---	---
Calhoun	2,325,320	4,865,576
Cass	1,055	---
Clare	562,166	157,540
Crawford	348,960	427,630
Genesee	9,048	---
Gladwin	330,573	---
Gratiot	17,269	7,297
Hillsdale	3,511,411	5,183,408
Huron	1,852	---
Ionia	59	---
Isabella	232,317	2,392
Jackson	1,401,204	2,498,701
Kalkaska	71,833	---
Kent	75,908	18,078
Lake	56,331	---
Lapeer	70,412	43,410
Lenawee	298	69,265
Livingston	868	8,703
Macomb	10,479	4,163,186
Mason	70,207	---
Mecosta	275,826	117,191
Midland	205,782	---
Missaukee	499,169	570,235
Monroe	3,701	---
Montcalm	148,591	7,160
Muskegon	71,651	---
Newaygo	23,411	---
Oakland	979	---
Oceana	57,932	---
Ogemaw	277,797	539,825
Osceola	586,695	195,125
Oscoda	1,568	---
Otsego	---	31,644
Ottawa	77,031	615,980
Roscommon	162,957	301,781
Saginaw	23,183	---
Shiawassee	11,502	---
St. Clair	581,450	19,143,167
Tuscola	70,801	---
Van Buren	10,669	---
Washtenaw	17,224	93,011
Wayne	10,642	43,447
Wexford	---	54,487
Totals:	12,974,404	39,685,162

Most new fields were found in established producing regions. None open large, undrilled areas for exploration. The number of wells completed in the new fields during 1968, and the cumulative production for the field can be found in the oil and gas field tables on the green pages. The location of new fields in relation to older fields is shown on the map segments, page 14.

Devonian and Silurian rocks were again an important drilling objective. About 36% of all wells were completed in Devonian rocks, and about 33% were completed in Silurian, mainly the Niagaran section. About 20% of the wells were completed in Middle Ordovician, Trenton-Black River rocks. The balance were completed in Mississippian rocks or those older than Middle Ordovician. An analysis of discoveries through a three-year period is shown in chart form. Extension discoveries and new pools are included.

ANALYSIS OF DISCOVERY WELLS BY GEOLOGIC SYSTEM

System	Formation or Pay	Number of Discoveries 1966	1967	1968
Pennsylvanian		-	-	-
Mississippian	"Michigan Stray Ss."	1	-	1
	"Berea"	-	1	-
Devonian	Antrim Shale	-	-	-
	"Traverse Lime"	3	1	6
	Dundee	1	3	1
	"Reed City"	3	-	1
	Detroit River "Sour Zone"	-	-	-
	Richfield	-	-	1
Silurian	Salina A-1 or A-2	-	-	-
	Niagaran reef*	2	3	4
Ordovician	Trenton-Black River	-	1	-
	Prairie du Chien	-	-	-
Cambrian	(Gas shows reported)	-	-	-

*Most reefs also have associated Salina A-1 oil or gas pays.

* * * DEEP TESTS * * *

About 7% of the 1968 exploratory wells reached total depth in Mississippian rocks, 21% in Devonian Traverse limestones, 17% in Devonian Dundee-Reed City limestones, 43% in Middle Silurian Niagaran rocks, and 12% in Middle Ordovician Trenton-Black River or deeper rocks. One Precambrian basement test was drilled during the year.

No firm criteria have been established for designating exploratory wells as important deep tests. Actual drilled depth is not the determining factor. Selections are most often based on the geologic age of the strata penetrated in reference to the location of the test within the basin, and the relative abundancy of similar tests in the area. Deeper pool tests in designated fields may also qualify as deep tests. Those selected for 1968 are listed on page 13.

A series of important deep tests were drilled in the northern part of the Southern Peninsula. Most of this region is sparsely explored and not much is known of its oil and gas possibilities. The locations of the more important tests in this region are shown on the small map, page 15. All tests were reported to have been based on gravimeter surveys. Though all were dry holes, the first one drilled was a near-discovery and is partially responsible for the extensive leasing campaign conducted in the northern part of the basin during 1968.

Pan American's No. 1 Draysey was the first well spudded in the exploratory project. Good shows of oil and gas were recovered on drill-stem tests in the Niagaran. These were by-passed and the well was drilled ahead to Middle Ordovician Trenton-Black River rocks where another drill stem test was run from 4364 to 4451 feet. Recoveries and pressures in this interval were unfavorable, and the well was finally drilled to Precambrian basement rock at a total depth of 5940 feet. Well-site geologists picked the top of the Precambrian rock at 5877. The well bottomed out in what are probably altered basalts. Inspection of well cuttings indicates that Precambrian

1968 DISCOVERY WELLS

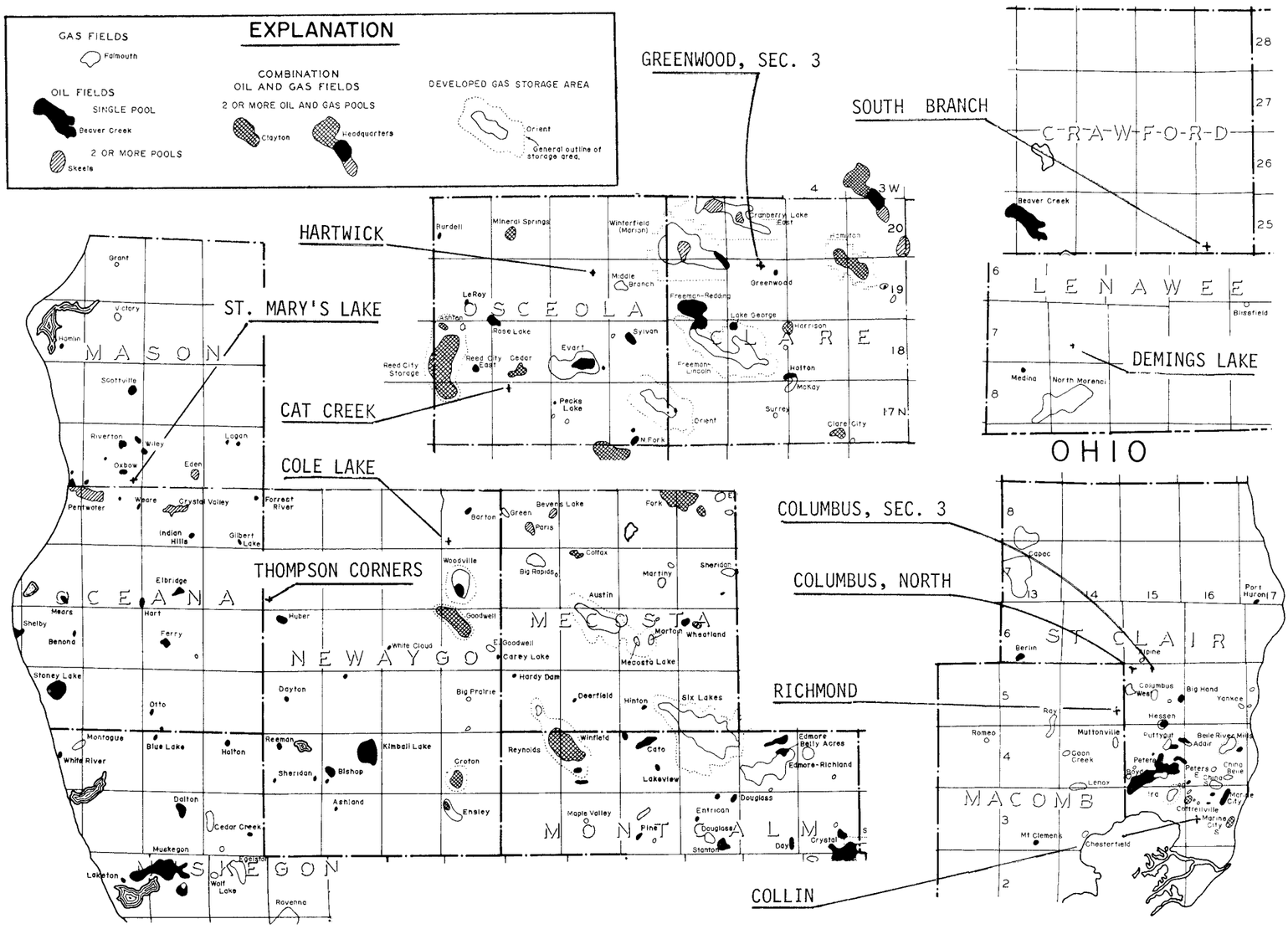
Field	County, Location, Permit No.	Operator and Lease	Comp. Date	Depth to Pay	Total Depth	Initial Production n=(N)IP BOPD	Initial Production t=(T)IP MCFGPD	Prod. Form.	Basis for Loc.
NEW FIELDS									
Cat Creek	Osceola 4-17N-9W SP 26900	M.C.G.C. & Leonard Oil, Inc. Leach #1	1-23	3696	3755	F50[t]		Dd.	Sub.
Cole Lake	Newaygo 30-16N-11W SP 27347	Black River Petroleum Corp. Englund et ux #1	11-1	2928	2938	P & F60[n]		Trav.	Sub
Collin	St. Clair 20-3N-16E SP 27004	C. W. Collin Fabian #1	1-30	2196	2364	F44[t]		Sal. A-1 Niag.	Grav.
Columbus, North	St. Clair 5-5N-15E SP 27384	McClure Oil Co. Ward #1	9-29	3266	3326	F50[t]		Niag.	Grav.
Columbus, Sec. 3	St. Clair 3-5N-15E SP 27465	Sun Oil Co. & Basin Oil Co. Winn et al #1	11-27	3105	3250	F35[t]		Niag.	Grav.
Demings Lake	Lenawee 27-7S-2E SP 27194	Bell & Gault Drlg. Co. Brower et al #1	3-8	723	741		900[n]	Trav.	Sub.
Greenwood, Sec. 3	Clare 3-19N-5W SP 27390	P. G. Benedum, NADCO, Woods Oil Co. Corlew et al #1	10-20	3438	4048	P60[t]		Trav.	Sub.
Hartwick	Osceola 11-19N-8W SP 27341	John P. Murphy Arndt & Peel et al #1	8-23	1681	1706		2600[n]	Mich. Stray	Sub.
Richmond	Macomb 26-5N-14E SP 27315	Sullivan & Leroux Goetz et al Unit #1	7-23	3195	3254		540[n]	Niag.	Grav.
South Branch	Crawford 32-25N-1W SP 27445	Sun Oil Co. Sheppard #1	11-26	4203	4436		1000[t]	Rich-field	Grav.
St. Mary's Lake	Mason 35-17N-17W SP 27371	Derk Van Raalte Lundberg #1	10-16	1641	1644	F50[t]		Trav.	Sub.
Thompson Corners	Newaygo 30-15N-14W SP 27339	George H. Gordon Stroud #1	9-9	2138	2140	P60[n]		Trav.	Sub.
NEW POOL DISCOVERY									
Wolf Lake	Muskegon 18-10N-15W SP 27223	Flory Drlg. Co. Olsen-Cislo Comm. #1	5-9	1757 1763	1764	P & F15[t]		Trav.	Sub.
EXTENSION DISCOVERY									
Cato	Mecosta 36-13N-9W SP 27149	Thomas H. Mall Paris et al #1	3-19	3556	3558	P22[t]		Reed City	Sub.

NOTE: t=(T)IP refers to initial potential after acid, sand-fracture, or a combination of well stimulation methods.
n=(N)IP refers to natural potential or production.

DEEP TESTS

County	Location	Operator and Lease	Permit Number	System and Formation	Total Depth	Explo. Class	Remarks
Alcona	30-28N-5E	North American Drlg. Co. #1 Cranberry Ranch	27060	Dev., D. R.	3040	OWDD	Old TD 2318
Antrim	35-29N-6W	Northern Mich. Explo. Co. #1 Adams Camp-sites	27249	Sil., Niag.	7000	NFW	
Gd. Traverse	5-26N-10W	Northern Mich. Explo. Co. #1 Dreves C.	27454	Sil., Niag	5850	NFW	
Gd. Traverse	32-27N-10W	Northern Mich. Explo. Co. #1 Kennett	27312	Sil., Clinton	6100	NFW	SO & G
Gd. Traverse	30-26N-12W	Northern Mich. Explo. Co. #1 Compton	27321	Sil., Clinton	5459	NFW	
Jackson	30-3S-3W	Nanco, Inc. #1 Smith A.	27137	Camb., Mt. Simon	5936	NFW	
Jackson	21-2S-2W	Swan & M.C.G.C. #1 Graham & Carlson	27478	Ord., P. D. C.	4996	NFW	
Kalkaska	17-27N-8W	Northern Mich. Explo. Co. #1 Keller	27287	Sil., Clinton	6950	NFW	
Manistee	16-24N-13W	McClure Oil Co. #1 Griner	27487	Sil., Niag.	5760	NFW	
Mason	3-20N-17W	Miller Bros. #1 Mikula	27155	Ord., P. D. C.	5519	NFW	SSG
Newaygo	20-15N-14W	Thunder Hollow O. & G. Co. #1 Thompson	26662	Camb., Mt. Simon	8215	OWDD	Old TD 6585
Presque Isle	12-34N-2E	Pan American Pet. Corp. #1 Smith L. B.	27250	Ord., Cinn.	3895	NFW	SO
Presque Isle	29-35N-2E	Cook Bros. & Lanphar O. & G. Corp. #1 Middaugh J.	27469	Sil., Niag.	2767	NFW	SG
Presque Isle	29-35N-2E	Pan American Pet. Corp. #1 Draysey D. E.	27199	Precambrian	5940	NFW	Near Niag. Disc.
Van Buren	16-2S-14W	McClure Oil Co. & Miller Bros. #1 Passmore	27402	Sil., Niag.	1987	NFW	
Washtenaw	21-3S-4E	Sun Oil Co. #1 Hoener L.	27099	Ord., P. D. C.	4505	NFW	SG
DRY DEEPER POOL TESTS 1968							
Genesee	18-8N-5E	Harris Oil, Inc. #2 Mesaros	27244	Dev., D. R.	2607	DPT	New Lothrop
Mason	26-17N-17W	D. B. K. Van Raalte #1 Schober R.	21200	Dev., R. C.	2324	DPT	Oxbow
Missaukee	35-22N-6W	Woods Oil Co. #2 Alderman-McCoy	27105	Dev., D. R.	5223	DPT	Prosper, South
Muskegon	18-10N-15W	Flory Drlg. Co. #1 Cislo F.	27342	Dev., Dundee	2140	DPT	Wolf Lake

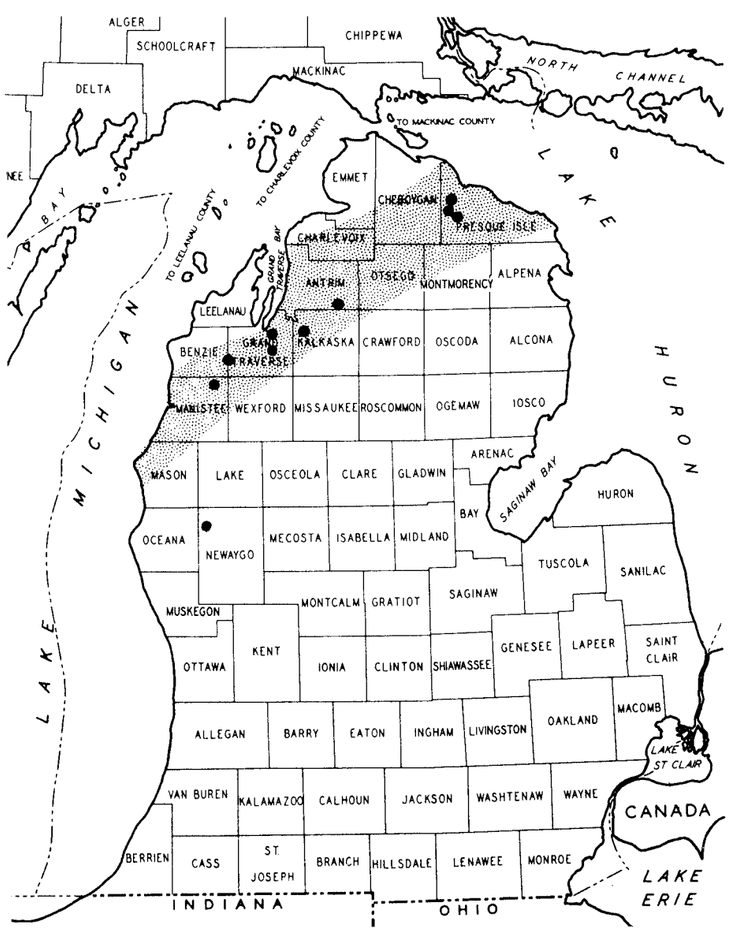
LOCATION OF NEW FIELD DISCOVERIES



quartzites were encountered at about 5714 feet, thus moving the Precambrian top 167 feet higher, stratigraphically. Samples for this well are on file at the Michigan Geological Survey, Department of Natural Resources, Lansing, Michigan.

The Draysey No. 1 was plugged back to 3023 feet and tested in the Niagaran section. Perforations (16 holes) were made at 2772-80 feet, acidized with 500 gallons of 15%, and then swabbed. Swab tests recovered 100 barrels of acid and formation water in 20 hrs. A second swab test recovered about 40 barrels of fluid containing about 10% oil of 44 degree gravity, API. This zone was squeezed to a new PBTD of 2764 feet. New perforations (12 holes) were made at 2742-48 feet, acidized with 500 15% MCA. Swab tests recovered 60 barrels water. The zone was reacidized with 2500 gallons 15% and swab tested with recoveries of 292 barrels water and 17 barrels oil. It was shut in 10 hours and then swabbed 7 hours with recoveries of 143 barrels saltwater and an estimated 15 barrels of oil. These perfs were squeezed and new perforations (12 holes) made at 2742-48 feet. This zone was tested at varying intervals for 6 days with the last test (14 hours) showing a recovery of 16 BOPD and 99 BWPD. The last 2 hours of this test showed an average recovery rate of 8 barrels of fluid per hour, approximately 14% oil. Additional perforations (6 holes) were made from 2734-37 feet, and acidized with 250 gallons. Swab tests of this interval resulted in the recovery of 115 barrels of water and 8 barrels oil in 13 hours. Finally, the perf zones from 2734-37 feet and 2742-48 feet were swab tested 41 hours. Recovery from this test amounted to 385 barrels of water and 41 barrels of oil. A total of 165 barrels of 41.5 gravity oil was recovered and sold. The oil has a low sulphur content and contains about 20 lbs. of salt per 1000 barrels. The well was abandoned as a dry hole.

A farm-out, direct 40 acre offset to Pan American's No. 1 Draysey was drilled with cable tools. This well bottomed-out at a total depth of 2767 feet, in Niagaran rocks. Operations reported an odor of gas in the Salina A-1 Carbonate formation overlying the Niagaran. No shows of oil or gas were reported in the Niagaran section, and the well was abandoned as a dry hole. A second test several miles south of the Draysey No. 1 also had shows of oil in Niagaran cores, but was abandoned as a dry hole. Subsequent exploration in the northern part of the state during 1968 was unfavorable.



Cores from a number of the deep tests drilled in the northern part of the basin are on file at the University of Michigan Subsurface Laboratory and are available for inspection. They are:

Pan Am Petr Corp #1 Draysey	29-35N-2E	Niagaran
Pan Am Petr Corp #1 Smith	12-34N-2E	Salina A-1 into Niagaran
NMECO #1 Campsites *	35-29N-6W	Niagaran
NMECO #1 Keller *	17-27N-8W	Salina A-1 Carb and Salt
NMECO #1 Compton *	30-26N-12W	Salina A-1 into Niagaran
NMECO #1 Kennett *	32-27N-10W	Salina A-1 into Niagaran
NMECO #1 Dreves *	5-26N-10W	Salina A-1 into Niagaran
McClure #1 Griner	16-24N-13W	Salina A-1 into Niagaran
McClure #1 Bailey	24-29N-7W	Salina A-1 to Niagaran
Pan Am Petr Corp #1 State-Blue Lake **	1-28N-5W	Salina A-1

* Northern Michigan Exploration Company
** State-Blue Lake No. 1 was drilled in 1969

* * * STATE ACREAGE UNDER LEASE * * *

State-owned lands under lease for oil and gas development at the end of 1968 amounted to 939,756 acres as compared with 308,177 acres at the end of 1967. Most of the newly leased land is in the northern part of the Southern Peninsula and was leased in connection with exploratory drilling and evaluation of the area. Revenue from oil and gas bonus, rental and royalty amounted to $2,002,870 as compared with $500,501 in 1967.

* * * NEW PUBLICATIONS IN 1968 * * *

Champion, B. L., 1968, Oil-Gas Activity in Michigan; Michigan Manufacturer and Financial Rec., V. 121, No. 5, P. 12, 46.

Ells, Garland D., 1968, Michigan's Oil and Gas Fields 1967: Michigan Geol. Survey Ann. Statistical Summ. 8, 72 pages.

_____ and Layton, F. L., 1968, Developments in Michigan in 1967: Am. Assoc. Petroleum Geologists Bull., V. 52, No. 6, P. 976-980

Ives, R. E. and Eddy, G. E., 1968, Subsurface Disposal of Industrial Wastes: Interstate Oil Compact Comm., P. 109

Michigan Basin Geological Society, Oil and Gas Field Symposium, 1968. This symposium is a collection of papers on selected Michigan oil and gas fields.

* * * PUBLIC HEARINGS * * *

Act No. 61 of the Public Acts of 1939, as amended, provides for hearings on oil and gas matters. Act No. 326 of the Public Acts of 1937, as amended, provides for hearings on matters pertaining to natural dry gas. Hearings on matters of local concern involving the administration of rules and regulations, such as exceptions to spacing orders, or pooling of interests to form drilling units, are conducted by the Supervisor of Wells, the State Geologist. Hearings on matters involving broad policies and practices having field-wide or state-wide application are conducted by the Supervisor of Wells and before the Advisory Board. Oil and gas hearings held during 1968 are summarized below.

OIL AND GAS HEARINGS

Hearings Per Month	January	February	March	April	May	June	July	August	September	October	November	December	Total
	3	3	3	1	1	1	2	3	5	3	2	2	29
Items or Causes Heard and Actions by the Supervisor													
Spacing Orders:													
Emergency										1			1
Amended						2		1		3	1		7
Adopted			1			1		1			2	1	6
Abrogated							3						3
Proration Orders													
Adopted							1						1
Amended						1							1
Off-Pattern Permits Issued	4	1	2	1	1	0	1	1	6	2	1	2	22
Determine Reservoir Status										1			1
Unitization of Pool								1					1
Items Heard, No Action Taken		2				1	1	1					5
Total Items or Causes	4	3	3	1	1	5	6	5	6	7	4	3	48

TABLE 3. NEW WELL COMPLETIONS BY DISTRICTS, 1968

	DISTRICTS					
	Basin	Northern	Western	Southwestern	Southeastern	Totals
CLASSIFICATION OF NEW WELL COMP.						
Oil Wells (1)	20	4	16	11	19	70
Gas Wells (2)	1	1	0	1	9	12
Gas Storage Wells	23	0	0	0	4	27
Water Injection Wells	0	2	0	0	0	2
LPG Storage	0	0	0	0	6	6
Brine Wells	0	0	0	0	1	1
Dry Holes	44	9	40	37	121	251
Total Well Completions	88	16	56	49	160	369
EXPLORATORY WELLS COMP.						
Exploratory Tests D & A	27	9	29	11	75	151
Successful Explo. Tests*	4	1	3	0	5	13
Total Explo. Tests	31	10	32	11	80	164

DRILLING PERMITS AND NEW COMPLETIONS BY MONTHS, 1968

	MONTHS												
	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
PERMITS ISSUED	32	34	18	25	39	19	26	42	32	46	33	32	378
CLASSIFICATION OF NEW WELL COMPLETIONS													
Oil Wells	7	7	3	5	6	3	7	6	6	9	7	4	70
Gas Wells	2	0	3	0	0	0	2	1	2	1	1	0	12
Gas Storage Wells	0	0	0	0	1	1	6	5	3	3	5	3	27
Water Injection	0	0	0	0	1	0	0	0	1	0	0	0	2
LPG Storage	0	1	1	2	1	0	0	0	1	0	0	0	6
Brine Wells	0	0	0	0	1	0	0	0	0	0	0	0	1
Dry Holes	23	19	18	13	19	18	27	22	24	21	26	21	251
Total Well Completions	32	27	25	20	29	22	42	34	37	34	39	28	369
EXPLORATORY WELLS COMPLETED													
Exploratory Tests D & A	16	9	8	9	7	13	18	16	11	12	17	15	151
Successful Exploratory Tests*	2	0	2	0	0	0	1	1	2	2	3	0	13
Total Exploratory Tests	18	9	10	9	7	13	19	17	13	14	20	15	164

(1) Does not include oil wells resulting from rework operations.
(2) Does not include gas wells resulting from rework operations.
* Does not include new pool discoveries; does include 1 extension discovery.

PART 2, OIL AND GAS FIELDS

Part 2 brings together general information mainly on Michigan's oil and gas fields, gas storage reservoirs, gas plant operations, and LPG storage facilities. In previous issues of oil and gas summaries, abandoned oil and gas fields have been listed on separate tables apart from active oil and gas fields. Certain cross-references in past published tables have been inconvenient and in some cases, confusing. The past system has been discontinued in favor of a single, consolidated table listing all oil and gas fields, active and abandoned, in alphabetical order. Developed and undeveloped gas storage reservoirs are also integrated in the listing, but for convenience they are also shown on separate tables.

MICHIGAN OIL AND GAS FIELDS, TABLE 4. Most fields consist of one pool with oil or gas production coming from a single formation. A few fields have 2 or more separate pools, each producing from a different formation or stratigraphic interval and at a different depth. Field names are shown in the first column and the producing pool, or pools, are shown under PRODUCING FORMATION OR POOL. The symbol on the left margin of the table indicates the official classification of fields and pools at the end of the year. LOCATION OF FIELDS according to Township, Range, and Sections are found at the bottom of the field block. The listed sections are those which have, or have had, producing wells assigned to the field. Oil and gas fields are considered abandoned when all wells have been plugged to the surface and the field equipment has been removed from the area. Abandoned pools within a multi-pool field are shown by symbol and by abandonment date. The PAY ZONE part of the table generally refers to data for the pool discovery well. The PAY THICKNESS shown does not necessarily indicate net producing pay for the reservoir. The DEEPEST FORMATION TESTED column indicates the deepest total depth and formation penetrated in the field. The NUMBER OF OIL AND GAS WELL columns indicate the number of successful field wells drilled in the field to the end of the specified year, the number completed as producing wells during the year, the number abandoned during the year, the number producing at the end of the year, and the number shut in or shut down at the end of the year. Most of the latter category are producible wells but for various reasons they were not in operation. The DRILLED ACRES column indicates the number of acres assigned to the field or pool according to individual well drilling units. A field may have a 10 or 20 acre drilling unit for one pool and a 40 acre drilling unit for a deeper formation pool within the field. Drilling units for oil wells have generally been of 10, 20, or 40 acre size. Gas well units, especially for Michigan Stray Sandstone reservoirs, have generally been 160 acre units. Other sizes currently in use are 40, 80, and 320 acre units. Changes in drilling units, off-pattern wells, etc. complicate the maintenance of accurate acreage figures during the life of a given field or individual pool. Where possible, drilled acreage is shown for individual pools. The figures cited in the column are not entirely accurate but do provide as near as possible an indication of the areal size of the field. The figures do not indicate the areal extent of the oil or gas reservoir. RECOVERY PER DRILLED ACRE figures for oil pools result from dividing the drilled acres figure into the cumulative oil production figure.

OIL AND GAS FIELD MAPS. These insert maps show the general locations of most Michigan fields. It is not practical to outline and show the names of all hydrocarbon accumulations that have been designated as an oil or gas field. In general, the field names shown on the several maps are in agreement with the field names shown on oil and gas field tables.

GAS FIELDS. Because of lack of marketing facilities, slow field development, or small reserves, some gas fields are listed as "shut in" and show no production figures. Others produce small quantities of unmetered gas and are not considered commercial. Production from these fields

is used as lease fuel or for domestic use.

GAS STORAGE RESERVOIRS. Most gas storage reservoirs were originally classified as gas fields or pools and upon depletion or near depletion they were converted to storage reservoirs. Undeveloped gas storage reservoirs are gas pools that have been designated to become storage reservoirs at some future time.

The producing sections listed on gas storage reservoir tables do not necessarily relate to current gas storage area or boundaries. The sections, or parts of sections, which are listed are those which contained at least one producible oil or gas well assigned to the field or pool prior to conversion to gas storage. Also, the sections do not necessarily relate to potential or future gas storage area or boundary.

LPG STORAGE. Surface and underground storage facilities for liquified petroleum gas.

OIL WELL GAS. This is casinghead gas produced incidental to the production of oil from pools or fields generally classified as oil accumulations.

OIL AND GAS WELL RECORDS. Geological logs and drillers logs are available for more than 27,500 oil and gas tests drilled in the Southern Peninsula. Individual logs may be purchased at small cost.

WELL SAMPLE SETS. Well cuttings from about 9000 wells are available for inspection at the Geological Survey, Lansing, Michigan.

TABLE 4 MICHIGAN OIL AND GAS FIELDS

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☼ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

	FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE DEPTH IN FEET	PAY ZONE THICKNESS AND LITHOLOGY	PAY ZONE OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968 TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS. PRODUCED IN 1968	OIL PRODUCTION - BBLS. CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf. PRODUCED IN 1968	GAS PRODUCTION - Mcf. CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION DISPOSAL SUBSURFACE	BRINE PRODUCTION DISPOSAL SURFACE	BRINE PRODUCTION TOTAL BBLS. DAY
●	ADAIR	ST. CLAIR	1961	SALINA-NIAGARAN	2719	10 D	41.4	NIAGARAN	2755	18	1	1	16	3	16,553	264,033	6,880	468,773	560	471	221		221
		CHINA TWP., 4N-16E, SECTION 7 CASCO TWP., 4N-15E, SECTIONS 12, 13																					
●	ADAMS	ARENAC-BAY	1937	TRAVERSE	2032	15 L	37.0	BOIS BLANC	5079	24	0	0	8	4					240		1	3	4
●			1937	DUNDEE	2958	15 L	34.7			31	0	0	17	0					310		5	20	25
●			1956	DETROIT RIVER SZ	3943	5 L	39.6	}															
●			1941	RICHFIELD	4278	5 L	35.5	}		31	0	0	8	1	20,356	1,424,503			1080	873	0	2	2
		ADAMS TWP., 19N-3E, SECTIONS 21, 23, 24, 25, 26, 27, 34, 35, 36 DEEP RIVER TWP., 19N-4E, SECTION 31								THE 8 WELLS INCLUDE 5 RICHFIELD, 1 SOUR ZONE, AND 2 DUAL COMPLETIONS, RICHFIELD AND SOUR ZONE													
☼	ADAMS, NORTH	ARENAC	1942	BEREA	1605	1 S		DUNDEE	3101	1	ABANDONED 1948							1,280	40				
●			1940	DUNDEE	2905	15 D	32.0	DETROIT RIVER	4489	49	0	0	19	1	33,105	9,198,025			470	19,570	3975	1	3976
		ADAMS TWP., 19N-3E, SECTIONS 11, 14, 15, 22, 23, 27 BEREA PRODUCTION - SECTION 4																					
☼	ADAMS, SEC. 8	HILLSDALE	1962	TRAVERSE	1420	4 L		PRAIRIE DU CHIEN	4169	1	ABANDONED 1965							18,919	20				
		ADAMS TWP., 6S-2W, SECTION 8																					
●	AKRON	TUSCOLA	1936	DUNDEE	2678	17 L	37.3	SYLVANIA	4130	50	0	0	34	6					1100		107	*30	137
●			1938	DETROIT RIVER SZ	3422	11 D	35.9	}		27	0	0	19	2	43,941	1,768,246			500	1,105	0	*32	32
●			1954	RICHFIELD	3774	6 D	39.2	}															
		AKRON TWP., 14N-8E, SECTIONS 19, 20, 21, 28, 29, 30 WISNER TWP., 14N-7E, SECTIONS 22, 23, 24, 25, 26								THE 19 WELLS INCLUDE 2 RICHFIELD, 12 SOUR ZONE AND 5 DUAL COMPLETIONS, SOUR ZONE & DUNDEE													
◐	ALAMO	KALAMAZOO	1949	TRAVERSE	1310	2 L		TRAVERSE	1420	16	ABANDONED 1962					27,545			160	172			
		ALAMO TWP., 1S-12W, SECTIONS 19, 29, 30																					
☼	ALBION	CALHOUN	1941	TRAVERSE	1610	7 L		PRAIRIE DU CHIEN	4623	4	ABANDONED 1948							6,114	120				
		ALBION TWP., 3S-4W, SECTIONS 14, 15																					
	ALBION-PULASKI-SCIPIO TREND: FIELD AND PRODUCTION DATA LISTED BY TOWNSHIP AND COUNTY																						
☼	CAL-LEE	CALHOUN	1962	NIAGARAN	3036	8 D		PRAIRIE DU CHIEN	4912	5	0	0	5	4			331,114	680,050	320				
		LEE TWP., 1S-5W, SECTIONS 16, 22																					
●	LEE TWP.	CALHOUN	1961	NIAGARAN	3060	20 D	24.2	PRAIRIE DU CHIEN	4912	1	0	0	1	1	0	5,269			80	66			
●			1960	TRENTON-BLACK RIVER	4600	24+ D				15	3	3	10	1	107,200	1,162,174			260	4,469	0	0	0
		LEE TWP., 1S-5W, SECTIONS 17, 22, 23, 26																					
●	SHERIDAN TWP.	CALHOUN	1960	TRENTON-BLACK RIVER	4179	10+ D	40.0	PRAIRIE DU CHIEN	4791	44	8	1	41	3	678,555	2,969,966	244,103	315,210	800	3,712	1,146	*29	1175
		SHERIDAN TWP., 2S-4W, SECTIONS 17, 18, 19, 20, 21, 28, 33																					
●	ALBION TWP.	CALHOUN	1958	TRENTON-BLACK RIVER	3952	? D	44.0	PRAIRIE DU CHIEN	4623	143	1	0	138	10	1,378,099	17,327,619	3,043,294	9,223,067	2760	6,278	3,167	9	3176
		ALBION TWP., 3S-4W, SECTIONS 3, 4, 10, 11, 14, 15, 22, 23, 26, 27, 35, 36																					
●	PULASKI-HOMER TWPS.	JACKSON-CALHOUN	1959	TRENTON-BLACK RIVER	3766	66+ D	39.6	PRAIRIE DU CHIEN	4395	139	1	0	136	6	1,472,916	20,032,066	3,095,516	8,777,760	2670	7,503	7,056	1	7057
		PULASKI TWP., 4S-3W, SECTIONS 6, 7, 8, 17, 18, 19, 20, 21, 28, 29, 32, 33, 34 HOMER TWP., 4S-4W, SECTIONS 1, 12																					
●	SCIPIO-PAYETTE-MOSCOW TWPS.	HILLSDALE	1957	TRENTON-BLACK RIVER	3576	50+ D	41.4	PRAIRIE DU CHIEN	4202	194	2	0	181	9	3,001,440	34,768,761	4,097,621	11,492,217	3420	10,166	4,902	2	4904
		SCIPIO TWP., 5S-3W, SECTIONS 3, 4, 10, 11, 12, 13, 14, 15, 23, 24, 25, 26; PAYETTE TWP., 5S-3W, SECTIONS 35, 36; MOSCOW TWP., 5S-2W, SECTIONS 19, 31, 32																					
●	ADAMS TWP.	HILLSDALE	1959	TRENTON-BLACK RIVER	3984	6+ D	42.0	PRAIRIE DU CHIEN	4162	55	3	0	47	3	509,972	5,595,792	1,085,787	2,863,151	930	6,017	499	0	499
		ADAMS TWP., 6S-2W, SECTIONS 3, 4, 5, 6, 8, 10, 16, 17																					
	TREND TOTAL:									596	18	4	559	37	7,148,182	81,861,657	11,566,321	82,735,521	10,920	7,496	16,770	41	16,811

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☼ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	OIL PRODUCTION - BBLS.: CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	GAS PRODUCTION - Mcf.: CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	BRINE PRODUCTION: DISPOSAL SURFACE	BRINE PRODUCTION: TOTAL BBLS. DAY
☼ ALGONAC	ST. CLAIR	1947	ANTRIM	302	6 SH		CABOT HEAD	2504	2	ABANDONED 1951							7,830	80				
	CLAY TWP., 3N-16E, SECTIONS 20, 29																					
◐ ALLEGAN	ALLEGAN	1937	TRAVERSE	1563	2 L	38.0	CINCINNATIAN	2987	18	ABANDONED 1961					15,577			180	87			
	ALLEGAN TWP., 2N-13W, Sections 2, 5, 9, 10, 13, 22, 23, 26, 27, 34, 35, 36																					
☼ ALPINE	ST. CLAIR	1963	NIAGARAN	3151	25 D		CLINTON	3470	1	0	0	1				154,200	229,825	80		0	0	0
	WALES TWP., 6N-15E, SECTION 32																					
● ARBELA	TUSCOLA	1946	DUNDEE	2557	7 L	35.3	DETROIT RIVER	3375	35	0	0	2		2,824	319,602			350	913	0	0	0
	ARBELA TWP., 10N-7E, SECTIONS 28, 33, 34																					
◐ ASHLAND, SEC. 8	NEWAYGO	1959	TRAVERSE	2238	1 L		TRAVERSE	2239	1	ABANDONED 1962					267			10	27			
	ASHLAND TWP., 11N-13W, SECTION 8																					
☼ ASHTON	OSCEOLA	1946	MICHIGAN STRAY	1215	2 S		DETROIT RIVER	3779	3	0	0	1	1	0		0	205,680	400		0	0	0
●		1945	TRAVERSE	2950	4 L	42.0			4	0	0	3						80		435	0	435
●		1945	DUNDEE	3645	5 L	40.0			4	0	0	4		10,229	424,790			200	1517	0	1	1
	LINCOLN TWP., 18N-10W, SECTIONS 5, 6																					
☼ ASHTON, EAST	OSCEOLA	1962	MICHIGAN STRAY	1297	5 S		REED CITY	3750	1	0	0	1	1			0	0	160				
	LINCOLN TWP., 18N-10W, SECTION 3																					
● ATLANTA	MONTMORENCY	1945	DETROIT RIVER	2183	5 D	36.2	DETROIT RIVER	2550	3	0	0	1		0	7,688			30	256	0	0	0
	AVERY TWP., 30N-3E, SECTIONS 10, 15																					
● AU GRES	ARENAC	1956	DETROIT RIVER SZ	3822	14 L	31.4	RICHFIELD	4315	DETROIT RIVER SZ COMBINED WITH RICHFIELD													
●		1953	RICHFIELD	4152	11 L	36.5			4	0	0	3		2,169	45,731			160	286	0	1	1
	AU GRES TWP., 19N-6E, SECTIONS 2, 3, 10, 11												THE 3 WELLS INCLUDE 2 RICHFIELD AND 1 RICHFIELD AND SOUR ZONE									
⊕ AUSTIN	REFER TO TABLE 5 DEVELOPED GAS STORAGE RESERVOIRS																					
◐ BANGOR	VAN BUREN	1939	TRAVERSE	1002	2 L	29.5	TRENTON	2552	65	ABANDONED 1959					933,965			610	1531			
	BANGOR TWP., 2S-16W, SECTIONS 4, 5, 9, 10, 14, 15, 16, 21, 28, 29																					
● BARD	GLADWIN	1949	DUNDEE	3933	6 L	42.8	DUNDEE	4017	17	0	0	4	1	3,166	570,475			170	3356	160	0	160
	BEAVERTON TWP., 17N-2W, SECTIONS 5, 6 GROUT TWP., 18N-2W, SECTIONS 31, 32																					
◐ BARTON	NEWAYGO	1947	TRAVERSE	3097	1 L	30.0	DETROIT RIVER	3745	3	ABANDONED 1963					20,227			50	405			
	BARTON TWP., 16N-11W, SECTION 16																					
◐ BEAVER, SEC. 31	BAY	1954	BEREA	2413	16 SL		SYLVANIA	4754	1	ABANDONED 1961					926			10	93			
	BEAVER TWP., 15N-3E, SECTION 31																					
● BEAVER CREEK UNIT	CRAWFORD-KALKASKA	1947	RICHFIELD	4160	20 D	44.7	SYLVANIA	4503	104	4	12	51		420,511	6,806,450	514,225	16,424,698	4160	1636	213	0	213
	BEAVER CREEK TWP., 25N-4W, SECTIONS 7, 8, 16, 17, 18, 19, 20, 21, 27, 28, 29; GARFIELD TWP., 25N-5W, SECTIONS 12, 13																					
● BEAVERTON	GLADWIN	1934	DUNDEE	3929	12 L	41.3	RICHFIELD	5225	26	0	0	4	1	4,335	864,477			330	2620	71	0	71
	BEAVERTON TWP., 17N-2W, SECTIONS 2, 3, 11, 13																					
● BEAVERTON, SOUTH	GLADWIN	1956	TRAVERSE	3231	6 L	41.0	DETROIT RIVER	4977 TRAVERSE COMBINED WITH DUNDEE														
●		1936	DUNDEE	3845	12 L	34.5			33	0	0	19		20,296	1,606,795			700	2263	242	3	245
	BEAVERTON TWP., 17N-2W, SECTIONS 26, 27, 35, 36; TOBACCO TWP., 17N-1W, SECTION 31												THE 19 WELLS INCLUDE 18 DUNDEE AND 1 DUNDEE & TRAVERSE									
● BEAVERTON, WEST	GLADWIN	1943	DUNDEE	3876	2 L	41.2	DETROIT RIVER	5094	7	0	0	4		9,757	143,923			260	553	13	0	13
	BEAVERTON TWP., 17N-2W, SECTION 19																					
⊕ BELLE RIVER MILLS	REFER TO TABLE DEVELOPED GAS STORAGE RESERVOIRS																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☼ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	OIL PRODUCTION - BBLS.: CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	GAS PRODUCTION - Mcf.: CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	BRINE PRODUCTION: DISPOSAL SURFACE	BRINE PRODUCTION: TOTAL BBLS. DAY
● BELLY ACHERS	MONTCALM	1944	DUNDEE	3470	1.3 D	48.2	DUNDEE	3615	7	0	0	3	1	785	334,512			220	1520	200	0	200
	HOME TWP., 12N-6W, SECTIONS 11, 14																					
◐ BENONA, SEC. 13	OCEANA	1949	TRAVERSE	1640	3 L		DETROIT RIVER	2276	2	ABANDONED 1956					4,951			20	248			
	BENONA TWP., 14N-18W, SECTION 13																					
● BENTLEY	GLADWIN	1952	TRAVERSE	2855	6 L	34.1	SYLVANIA	5114 TRAVERSE COMBINED WITH DUNDEE & RICHFIELD														
●		1937	DUNDEE	3510	13 L	42.1			87	0	0	47	4							79	*15	94
●		1952	RICHFIELD	4440	14 L	40.0			1	0	0	1		38,433	2,758,109			1960	1407	2	0	2
	BENTLEY TWP., 17N-2E, SECTIONS 16, 17, 18, 19, 20, 21, 27, 28, 29, 34, 35												THE 48 WELLS INCLUDE 47 DUNDEE AND 1 MULTIPLE COMPLETION TRAVERSE, DUNDEE & RICHFIELD									
● BERLIN	ST. CLAIR	1960	NIAGARAN	3800	25 D	42.8	CINCINNATIAN	4310	4	0	0	4		16,220	328,127			140	2340	0	0	0
	BERLIN TWP., 6N-13E, SECTIONS 32, 33																					
☼ BEVANS LAKE	MECOSTA	1952	MICHIGAN STRAY	1244	6 S		REED CITY	3771	3	0	0	1	1			0	515,405			0	0	0
●		1951	TRAVERSE	2997	1 L	44.2			4	0	0	1		1,063	89,022			40	2225	80	0	80
☼		1951	DUNDEE	3536	11 L				2	0	0	1				13,231	719,365	320		0	0	0
	GREEN TWP., 16N-10W, SECTION 13																					
● BIG HAND	ST. CLAIR	1961	NIAGARAN	2898	5+ D	39.5	CLINTON	3097	9	0	0	9		67,350	579,277			220	2633	42	*5	47
	COLUMBUS TWP., 5N-15E, SECTIONS 24, 25																					
◐ BIG PRAIRIE	NEWAYGO	1944	MICHIGAN STRAY	1030	5 S		REED CITY	3322	1	ABANDONED 1961							152,864	160				
	BIG PRAIRIE TWP., 13N-11W, SECTION 16																					
◐ BIG PRAIRIE, SEC. 33	NEWAYGO	1947	DUNDEE	2896	2 L		DUNDEE	2900	1	ABANDONED 1952							62,384	40				
	BIG PRAIRIE TWP., 13N-11W, SECTION 33																					
☼ BIG RAPIDS	MECOSTA	1943	MICHIGAN STRAY	1145	7 S		REED CITY	3595	9	0	0	1				6,719	2,393,033	1440		0	0	0
☼		1965	DUNDEE	3420	6 L				1	0	0	1				0	42,906	160		0	0	0
	BIG RAPIDS TWP., 15N-10W, SECTIONS 3, 9, 10, 11, 13																					
● BILLINGS	GLADWIN	1949	DUNDEE	3549	6 L	39.7	RICHFIELD	4995	20	0	0	19						400		2	0	2
●		1950	DETROIT RIVER	4070	7 D	43.5			10	0	0	9		13,401	748,439			200	1247	0	0	0
	BILLINGS TWP., 17N-1E, SECTIONS 2, 3, 10, 11																					
● BILLINGS, SOUTH	GLADWIN	1957	DUNDEE	3540	5 ?	39.5	DETROIT RIVER	4152	8	0	0	8		8,668	134,360			70	1919	0	1	1
	BILLINGS TWP., 17N-1E, SECTIONS 12, 13; BENTLEY TWP., 17N-2E, SECTION 18																					
● BIRCH-BELA	SAGINAW-TUSCOLA	1951	DUNDEE	2504	7 L	36.0	DETROIT RIVER	3263	29	0	0	29	1	21,374	236,089			320	738	0	*6	6
	BIRCH RUN TWP., 10N-6E, SECTIONS 25, 36; ARBELA TWP., 10N-7E, SECTIONS 30, 31, 32																					
◐ BIRCH RUN	SAGINAW	1934	BEREA	1530	5 S	43.3	DUNDEE	2646	26	ABANDONED 1951					215,876			250	864			
●		1954	DUNDEE	2536	10 L	36.2	DUNDEE	2716	34	0	0	32	3	15,781	480,485			480	1001	0	*1	1
	BIRCH RUN TWP., 10N-6E, SECTIONS 19, 20, 21 (Berea); BIRCH RUN TWP., 10N-6E, SECTIONS 19,20,29; TAYMOUTH TWP., 10N-5E, SECTION 13 (Dundee)																					
◐ BISHOP	NEWAYGO	1950	TRAVERSE	2226	3 L		TRAVERSE	2238	7	ABANDONED 1952					33,327			110	303			
	GARFIELD TWP., 12N-13W, SECTIONS 19, 20, 30																					
☼ BLISSFIELD	LENAWEE	1963	TRENTON-BLACK RIVER	2686	9 D		GLENWOOD	3851	1	0	0	1		144	280	20,502	29,212	40	GAS RESERVOIR PRODUCING SMALL QUANTITIES OF OIL			
	BLISSFIELD TWP., 7S-5E, SECTION 5																					
● BLOOMER	MONTCALM-IONIA	1944	TRAVERSE	2640	3.3 L	42.3	DETROIT RIVER	3271	29	0	2	5		14,653	1,926,191			530	3634	850	0	850
	BLOOMER TWP., 9N-5W, SECTIONS 31, 32; BUSHNELL TWP., 9N-6W, SECTION 36; NORTH PLAINS TWP., 8N-5W, SECTIONS 5, 6																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☒ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	OIL PRODUCTION - BBLS.: CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	GAS PRODUCTION - Mcf.: CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	BRINE PRODUCTION: DISPOSAL SURFACE	BRINE PRODUCTION: TOTAL BBLS. DAY
● BLOOMER, SEC. 18	MONTCALM	1936	TRAVERSE	2717	6 L		DUNDEE	3138	1	ABANDONED 1936					814			10	81			
	BLOOMER TWP., 9N-5W, SECTION 18																					
● BLOOMINGDALE	VAN BUREN	1938	TRAVERSE	1244	4 L	42.0	TRENTON	3090	431	0	1	27	9	8,478	9,974,338			4040	2469	407	11	418
	BLOOMINGDALE TWP., 1S-14W, SECTIONS 1, 2, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 24; COLUMBIA TWP., 1S-15W, SECTIONS 1, 2, 10, 11, 12, 13, 14, 15, 16, 23, 24; PINE GROVE TWP., 1S-13W, SECTION 18																					
● BOYD	ST. CLAIR	1958	SALINA-NIAGARAN	2457	292 D	37.7	PRECAMBRIAN	4634	49	0	1	45	5	119,727	1,502,469	1,189,053	11,485,505	1840	816	456	0	456
	CASCO TWP., 4N-15E, SECTIONS 29, 31, 32, W½ 28, W½ 33; IRA TWP., 3N-15E, SECTIONS 5, 6,																					
◐ BREEDSVILLE	VAN BUREN	1943	TRAVERSE	1061	2 L	33.0	DETROIT RIVER	1445	32	ABANDONED 1961					285,584			300	952			
	GENEVA TWP., 1S-16W, SECTIONS 23, 24, 25, 26																					
● BRINTON	ISABELLA	1967	DUNDEE	4082	3 D		DUNDEE	4085	1	0	0	1		8,715	10,779			40	269	250	0	250
	COLDWATER TWP., 16N-6W, SECTION 5																					
⊖ BROOMFIELD-DEERFIELD	REFER TO TABLE 6 UNDEVELOPED GAS STORAGE RESERVOIRS																					
● BUCKEYE, NORTH	GLADWIN	1936	DUNDEE	3615	14 L	39.0	SYLVANIA	5351	287	0	0	62	12	126,594	18,933,262	0	9,834	3030	6849	2135	*17	2132
	BUCKEYE TWP., 18N-1W, SECTIONS 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15; HAY TWP., 18N-1E, SECTIONS 15, 16, 21, 22																					
◐ BUCKEYE, SOUTH	GLADWIN	1956	TRAVERSE	2891	3 D	42.0	DETROIT RIVER	4802	7	ABANDONED 1960 - PRODUCTION COMBINED WITH BUCKEYE, SOUTH DUNDEE												
●		1936	DUNDEE	3570	11 L	39.0			197	0	1	26	1	20,504	4,944,949			2270	2178	12	*34	46
●		1964	DETROIT RIVER SZ	4481	14 D	46.0			1	0	0	1		9,015	60,115			40	1503			
	BUCKEYE TWP., 18N-1W, SECTIONS 22, 23, 24, 25, 26, 27, 35, 36; HAY TWP., 18N-1E, SECTION 33; BILLINGS TWP., 17N-1E, SECTIONS 4, 9, 10; TOBACCO TWP., 17N-1W, SECTION 1																					
● BURDELL	OSCEOLA	1959	DUNDEE	3678	4 L		REED CITY	3804	5	0	0	3						120		230	0	230
●		1960	REED CITY	3802	2 D				1	0	0	1	1	3,379	145,399			40	909			
	BURDELL TWP., 20N-10W, SECTION 19																					
◐ BUSHNELL	MONTCALM	1935	DUNDEE	3105	2 L	33.9	DUNDEE	3125	1	ABANDONED 1939					4,035			10	403			
	BUSHNELL TWP., 9N- 6W, SECTION 1																					
◐ BUTMAN	GLADWIN	1950	TRAVERSE	2789	2 L		SYLVANIA	5027	1	ABANDONED 1953 - PRODUCTION COMBINED WITH BUTMAN RICHFIELD												
◐		1949	DUNDEE	3596	6 L	41.4			1	ABANDONED 1963 - PRODUCTION COMBINED WITH BUTMAN RICHFIELD												
●		1949	RICHFIELD	4921	10 D	41.6			5	0	0	5		6,054	290,501			230	1263	30	1	31
	BUTMAN TWP., 20N-1W, SECTION 1 (Traverse); BUTMAN TWP., 20N-1W, SECTIONS 11, 12, 13, 14 (Dundee & Richfield)																					
☼ CAL-LEE	REFER TO ALBION-PULASKI-SCIPIO TREND																					
☒ CANNON CREEK	MISSAUKEE-KALKASKA	1950	TRAVERSE	2695	11 L		RICHFIELD	4810	21	ABANDONED 1956							851,369	3360				
	NORWICH TWP., 24N-6W, SECTIONS 6, 7, 18; PIONEER TWP., 24N-7W, SECTIONS 1, 2, 12, 13; GARFIELD TWP., 25N-6W, SECTION 31; GARFIELD TWP., 25N-7W, SECTIONS 25, 36																					
☼ CAPAC	ST. CLAIR	1961	NIAGARAN	4505	6 D		MT. SIMON Ss	6337	54	1	3	49		1,617	4,014	3,956,996	10,303,095	9120		0	*6	6
	MUSSEY TWP., 7N-13E, SECTIONS 4, 5, 8, 9, 16, 17, 18, 19, 20, 21, 28, 29, 32, 33; LYNN TWP., 8N-13E, SECTIONS 21, 27, 28, 29, 32, 33, 34														GAS RESERVOIR PRODUCING SMALL QUANTITIES OF OIL							
● CAREY LAKE	NEWAYGO	1966	REED CITY	3411	2 D		REED CITY	3413	2	0	0	2		3,117	18,147			80	227	0	1	1
	GOODWELL TWP., 14N-11W, SECTION 26																					
◐ CASCO	ALLEGAN-VAN BUREN	1940	TRAVERSE	1095	1.5 L	38.6	TRAVERSE	1115	9	ABANDONED 1959					17,382			50	348			
	CASCO TWP., 1N-16W, SECTIONS 34, 35; GENEVA TWP., 1S-16W, SECTION 4																					
● CAT CREEK	OSCEOLA	1968	DUNDEE	3696	4 L		DUNDEE	3890	4	4	0	4		47,047	47,047			160	294	35	3	38
	HERSEY TWP., 17N-9W, SECTIONS 4, 10																					
● CATO	MONTCALM-MECOSTA	1944	REED CITY	3542	3 D	44.7	DETROIT RIVER	3731	19	2	0	9	1	20,991	941,331			610	1543	1715	*45	1760
	CATO TWP., 12N-8W, SECTIONS 3, 4, 6, 8, 9; DEERFIELD TWP., 13N-9W, SECTION 36																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☒ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	OIL PRODUCTION - BBLS.: CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	GAS PRODUCTION - Mcf.: CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	BRINE PRODUCTION: DISPOSAL SURFACE	BRINE PRODUCTION: TOTAL BBLS. DAY
☼ CEDAR	OSCEOLA	1945	MICHIGAN STRAY	1490	7 S		SYLVANIA	5165	5	0	0	4				1,266	1,402,820	800		0	0	0
●		1943	DUNDEE	3810	2 L	46.0			10	0	0	7						400		1850	0	1850
●		1945	RICHFIELD	5060	6 L	44.7			2	0	0	2		14,471	1,078,843			60	2345	0	0	0
	CEDAR TWP., 18N-9W, SECTIONS 27, 28, 32, 33 (Michigan Stray); CEDAR TWP., 18N-9W, SECTIONS 10, 27, 28, 33, 34 (Dundee and Richfield)																					
☒ CEDAR CREEK	MUSKEGON	1940	"BEREA"	1125	7 D		DUNDEE	2252	7	ABANDONED 1960							624,528	1120				
	CEDAR CREEK TWP., 11N-15W, SECTIONS 7, 17, 18, 19, 20, 32																					
◐ CEDAR CREEK, SEC. 23	MUSKEGON	1949	TRAVERSE	1951	2 L		DUNDEE	2453	2	0	1	0		0	2,652	ABANDONED 1968	50	53				
	CEDAR CREEK TWP., 11N-15W, SECTION 23																					
● CHASE	LAKE	1943	"BEREA"	2460	4 SL		DETROIT RIVER	3734	2	0	0	1		154	7,827			20	391	0	0	0
	CHASE TWP., 17N-11W, SECTIONS 19, 29																					
◐ CHERRY GROVE	WEXFORD	1952	TRAVERSE	3145	4 D		DUNDEE	3998	1	ABANDONED 1953					4,814			10	481			
	CHERRY GROVE TWP., 21N-10W, SECTION 27																					
☼ CHERRY GROVE SEC. 13	WEXFORD	1957	MICHIGAN STRAY	1326	35 S		DUNDEE	4080	5	0	2	1	1			54,487	924,719	640		0	0	0
	CHERRY GROVE TWP., 21N-10W, SECTION 13; CLAM LAKE TWP., 21N-9W, SECTIONS 7, 18																					
◐ CHESHIRE	ALLEGAN	1947	TRAVERSE	1289	2 L	35	TRAVERSE	1348	3	ABANDONED 1958					9,290			30	310			
	CHESHIRE TWP., 1N-14W, SECTIONS 26, 27																					
☼ CHESTER	OTSEGO	1965	ANTRIM	1360	? SH		NIAGARAN	6870	16	0	0	16	3			7,304	7,304	640		0	0	0
	CHESTER TWP., 29N-2W, SECTIONS 10, 11, 14, 15, 16																					
◐ CHESTER, SEC. 15	OTSEGO	1951	SALINA	6610	5 D	41.0	NIAGARAN	6870	1	ABANDONED 1956					2,752			40	69			
	CHESTER TWP., 29N-2W, SECTION 15																					
● CHESTERFIELD	MACOMB	1962	NIAGARAN	2508	7 D	40.3	CLINTON	2707	7	1	0	3		10,480	30,269	0	124,698	280	108	25	0	25
	CHESTERFIELD TWP., 3N-14E, SECTION 29																					
☼ CHINA BELLE	ST. CLAIR	1963	NIAGARAN	2365	15 D		NIAGARAN	2451	3	0	0	3		820	1,426	54,658	326,352	120		14	0	14
	CHINA TWP., 4N-16E, SECTIONS 34, 35													GAS RESERVOIR PRODUCING SMALL QUANTITIES OF OIL								
● CHINA, SEC. 12	ST. CLAIR	1962	NIAGARAN	2509	11 D	39.1	CLINTON	2631	2	0	0	2	2	0	11,895		27,721	80	149			
	CHINA TWP., 4N-16E, SECTION 12																					
◐ CHINA, SEC. 31	ST. CLAIR	1959	SALINA	ABANDONED IN 1964; PRODUCTION COMBINED WITH COTTRELLVILLE IN 1962																		
	CHINA TWP., 4N-16E, SECTION 31																					
☼ CHINA, SOUTH	ST. CLAIR	1961	SALINA-NIAGARAN	2324	14 D		CLINTON	2743	11	0	0	5	4			3,561	523,443	440		0	0	0
	CHINA TWP., 4N-16E, SECTIONS 28, 33, 34; COTTRELLVILLE TWP., 3N-16E, SECTIONS 3, 4																					
◐ CHIPPEWA, SEC. 10	ISABELLA	1961	TRAVERSE	3193	1 L		TRAVERSE	3220	1	ABANDONED 1964					1,250		PRODUCTION CARRIED IN MT. PLEASANT FIELD TOTALS					
	CHIPPEWA TWP., 14N-3W, SECTION 10																					
☼ CLARE CITY	CLARE-ISABELLA	1937	MICHIGAN STRAY	1290	5 S		DUNDEE	3865	8	0	0	1		822	74,245	0	2,894,990	720	103	DOMESTIC USE		
	GRANT TWP., 17N-4W, SECTIONS 25, 26, 35, 36; SHERIDAN TWP., 17N-3W, SECTION 31; WISE TWP., 16N-3W, SECTION 6																					
● CLARE CITY	CLARE-ISABELLA	1938	MICHIGAN STRAY	1303	2 S	30.2	DUNDEE	3853	7	0	0	4	1					120		0	0	0
	GRANT TWP., 17N-4W, SECTIONS 24, 35, 36; WISE TWP., 16N-3W, SECTION 6																					
☼ CLAYTON	ARENAC	1936	BEREA	1180	10 S		SYLVANIA	4163	31	0	0	17	2			0	5,111,048	1560	DOMESTIC USE & LEASE OPERATION			
	CLAYTON TWP., 20N-4E, SECTIONS 4, 5, 8, 9, 10, 11, 14, 15																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☒ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

	FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	DISPOSAL SURFACE	TOTAL BBLS. DAY
●	CLAYTON	ARENAC-OGEMAW	1935	DUNDEE	2465	12 DL	34.2	SYLVANIA	4163	80	0	0	47	5					1290		1343	17	1360
●			1953	DETROIT RIVER	3507	9 D	45.9																
●			1947	RICHFIELD	3790	9 D	36.2			5	0	0	5		47,192	6,244,796			200	4191	0	0	0
		CLAYTON TWP., 20N-4E, SECTIONS 3, 4, 5, 8, 9, 10, 11; RICHLAND TWP., 21N-4E, SECTION 31; MILLS TWP., 21N-3E, SECTION 36								THE 5 WELLS INCLUDE 3 RICHFIELD, 1 SOUR ZONE AND 1 DUAL COMPLETION RICHFIELD & SOUR ZONE												
◐	CLEAR LAKE	VAN BUREN	1950	TRAVERSE	1380	1 L		TRAVERSE	1399	14	ABANDONED 1953					17,490			140	125			
		PINE GROVE TWP., 1S-13W, SECTIONS 3, 4, 9, 10																					
◐	CLINTON	WASHTENAW	1953	TRAVERSE	906	2 D		TRENTON	3606	2	ABANDONED 1962					2,093			20	105			
		BRIDGEWATER TWP., 4S-4E, SECTION 28																					
◐	COFFEE LAKE	VAN BUREN	1946	TRAVERSE	1128	1 L		TRAVERSE	1130	11	ABANDONED 1954					34,649			110	315			
		COLUMBIA TWP., 1S-15W, SECTIONS 17, 18																					
⊖	COLDWATER	REFER TO TABLE 6 UNDEVELOPED GAS STORAGE RESERVOIRS																					
●	COLDWATER	ISABELLA	1944	DUNDEE	3692	25 L	48.0	DETROIT RIVER	5090	81	0	1	52	15	103,471	21,608,597	0	6,311,307	3200	6752	29,627	0	29,627
		COLDWATER TWP., 16N-6W, SECTIONS 19, 20, 21, 28, 29, 30, 31, 32, 33, 34; SHERMAN TWP., 15N-6W, SECTIONS 5, 6																					
◐	COLDWATER, SOUTH	ISABELLA	1951	DUNDEE	3739	4 D		DUNDEE	3743	1	ABANDONED 1959					10,941			20	547			
		SHERMAN TWP., 15N-6W, SECTION 8																					
●	COLE LAKE	NEWAYGO	1968	TRAVERSE	2928	8 L		TRAVERSE	2938	1	1	0	1		1,425	1,425			20	71	0	0	0
		BARTON TWP., 16N-11W, SECTION 30																					
☼	COLFAX	MECOSTA	1945	MICHIGAN STRAY	1240	8 S		DETROIT RIVER	4043	4	0	0	1				0	485,844	640				
●			1964	DUNDEE	3503	25 L	43.0			2	ABANDONED 1967					2,260	0	5,121	40	57			
☼			1957	DUNDEE-REED CITY	3474	9 D				1	0	0	1				0	5,121	160		DOMESTIC USE		
		COLFAX TWP., 15N-5W, SECTIONS 4, 5																					
☼	COLLIN	ST. CLAIR	1968	SALINA-NIAGARAN	2196	4 D		NIAGARAN	2364	2	2	0	2	2	1,888	1,888	0	0	80	40	47		
		COTTRELLVILLE TWP., 3N-16E, SECTION 20																					
☼	COLUMBUS	ST. CLAIR	1964	SALINA-NIAGARAN	2738	190 D		CLINTON	3232	8	0	0	8		0	137	2,380,456	9,823,599	320		104	0	104
		COLUMBUS TWP., 5N-15E, SECTIONS 15, 16, 21, 22																GAS RESERVOIR PRODUCING SMALL QUANTITIES OF OIL					
●	COLUMBUS, SEC. 3	ST. CLAIR	1968	NIAGARAN	3105	15 D		NIAGARAN	3250	1	1	0	1		0	0			20		0	0	0
		COLUMBUS TWP., 5N-15E, SECTION 3																					
☼	COLUMBUS, SEC. 23	ST. CLAIR	1965	NIAGARAN	2900	46+ D		CLINTON	3122	6	0	0	6		4,447	6,483	53,147	53,147	240	27	100	0	100
		COLUMBUS TWP., 5N-15E, SECTION 23																GAS RESERVOIR PRODUCING SMALL QUANTITIES OF OIL					
●	COLUMBUS, NORTH	COLUMBUS	1968	NIAGARAN	3266	8 D		NIAGARAN	3326	1	1	0	1		1,350	1,350			80		0	0	0
		COLUMBUS TWP., 5N-15E, SECTION 5																					
☼	COLUMBUS, WEST	ST. CLAIR	1967	SALINA-NIAGARAN	3183	14+ D		CLINTON	3370	13	1	0	13	1			5,052,747	5,052,747	520		29	0	29
		COLUMBUS TWP., 5N-15E, SECTIONS 7, 17, 18																					
●	COMSTOCK, SEC. 5	KALAMAZOO	1949	TRAVERSE	1430	3 L		TRAVERSE	1480	2	ABANDONED 1952					974			20	49			
		COMSTOCK TWP. 2S-10W, SECTION 5																					
●	CONCORD	JACKSON	1953	TRAVERSE	1627	1 L		SALINA	2417	5	ABANDONED 1958					6,437			50	129			
		CONCORD TWP., 3S-3W, SECTIONS 35, 36																					
☒	COON CREEK	MACOMB	1963	NIAGARAN	3034	20 D		NIAGARAN	3093	2	0	1	0	ABANDONED 1968				134,116	80				
		LENOX TWP., 4N-14E, SECTION 18																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☒ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

	FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	DISPOSAL SURFACE	TOTAL BBLS. DAY
☒	COOPERSVILLE	OTTAWA	1939	"BEREA"	1240	5 D		TRAVERSE	1900	3	ABANDONED 1959							108,839	240				
		WRIGHT TWP., 8N-13W, SECTIONS 7, 19																					
●	COTTRELLVILLE	ST. CLAIR	1961	SALINA-NIAGARAN	2262	6 D	38.7	CLINTON	2511	12	0	1	8	1	9,499	100,896			280	360	3	0	3
		CHINA TWP., 4N-16E, SECTION 31; COTTRELLVILLE TWP., 3N-16E, SECTIONS 6, 7, 8; IRA TWP., 3N-15E, SE¼ SECTION 1, NE¼ SECTION 12																					
☼	COTTRELLVILLE	ST. CLAIR	1959	SALINA-NIAGARAN	2293	37 D		CLINTON	2511	2	0	0	2				180,336	1,695,267	240		10	0	10
		COTTRELLVILLE TWP., 3N-16E, SECTIONS 6, 7, 8																					
⊕	CRANBERRY LAKE	REFER TO TABLE 5 DEVELOPED GAS STORAGE RESERVOIRS																					
◐	CRANBERRY LAKE	CLARE	1952	TRAVERSE	3120	7 L	39.0	RICHFIELD	5223	7	ABANDONED 1965	PRODUCTION COMBINED WITH CRANBERRY LAKE, DUNDEE, TRAVERSE, AND RICHFIELD											
●			1943	DUNDEE	3835	2 L	42.8			8	0	0	3	1					70		400	0	400
◐			1953	DETROIT RIVER SZ	4801	16	48.8			1	ABANDONED 1962	PRODUCTION COMBINED WITH CRANBERRY LAKE, DUNDEE, TRAVERSE, AND RICHFIELD											
●			1951	RICHFIELD	5048	15 D	51.0			17	0	0	12	1	35,812	1,441,868			680	1922	52	7	59
		WINTERFIELD TWP., 20N-6W, SECTIONS 1, 2, 11, 12																					
◐	CRANBERRY LAKE, EAST	CLARE	1963	TRAVERSE	3057	6	39.2	DETROIT RIVER	5139	1	ABANDONED 1964					588		PRODUCTION COMBINED WITH DUNDEE AND RICHFIELD					
●			1963	DUNDEE	3760	6	43.5			4	0	0	4						200		646	0	646
●			1964	RICHFIELD	5087	12 D	44.0			2	0	0	2		79,134	424,956			80	1518	24	0	24
		SUMNERFIELD TWP., 20N-5W, SECTIONS 7, 8, 17													2 RICHFIELD WELLS INCLUDES 1 DUNDEE & RICHFIELD DUAL COMPLETION								
◐	CROOKED LAKE	ALLEGAN	1949	TRAVERSE	1278	1 L		TRAVERSE	1312	2	ABANDONED 1956					115,452			40	2886			
		CLYDE TWP., 2N-15W, SECTION 25																					
⊕	CROTON	REFER TO TABLE 5 DEVELOPED GAS STORAGE RESERVOIRS																					
◐	CROTON	NEWAYGO	1951	TRAVERSE	2543	2 L		SALINA	3993	10	ABANDONED 1958					91,678			200	458			
		CROTON TWP., 12N-11W, SECTIONS 20, 29																					
◐	CRUMP	BAY	1950	DUNDEE	3294	7 L		DUNDEE	3354	1	ABANDONED 1951					1,043			10	104			
		GARFIELD TWP., 16N-3E, SECTION 23																					
●	CRYSTAL	MONTCALM	1954	TRAVERSE	2769	4 L	41.8	DETROIT RIVER	3391	2	0	0	1						20		330	0	330
●			1935	DUNDEE	3187	4 D	43.5			193	0	0	7	1	8,860	7,780,580			2000	3851	1085	0	1085
		CRYSTAL TWP., 10N-5W, SECTIONS 1, 2, 3, 4, 10, 11, 12, 13; FERRIS TWP., 11N-5W, SECTIONS 26, 34, 35, 36																					
●	CRYSTAL VALLEY	OCEANA	1945	TRAVERSE	1809	3 L	37.0	ST. PETER Ss	6062	5	0	0	1						50		175	0	175
●			1957	DUNDEE	2575	12 D	42.5			19	0	0	1	1	131	203,747	0	162,079	420	434			
		CRYSTAL TWP., 16N-16W, SECTIONS 9, 10, 11, 14, 15, 16																					
☒	CRYSTAL VALLEY	OCEANA	1946	DUNDEE	2400	7 L		TRENTON-BLACK RIVER	5985	4	ABANDONED 1966							*162,079	160				
☒			1961	SALINA	4102	10 D				1	ABANDONED 1966							*PRODUCTION COMBINED	40				
		CRYSTAL TWP., 16N-16W, SECTIONS 9, 10, 11, 14, 15, 16																					
●	CURRIE	ISABELLA	1936	DUNDEE	3918	2 D	45.9	DUNDEE	4042	2	0	0	2		1,026	200,922			40	5023	0	0	0
		VERNON TWP., 16N-4W, SECTIONS 5, 8																					
◐	DALLAS	CLINTON	1942	TRAVERSE	2482	2 L		DETROIT RIVER	2934	3	ABANDONED 1948					3,085			40	770			
		DALLAS TWP., 7N-4W, SECTION 21																					
●	DALTON	MUSKEGON	1940	TRAVERSE	1851	5 L	40.0	DUNDEE	2515	16	0	0	6		697	106,924			300	356	0	1	1
		DALTON TWP., 11N-16W, SECTIONS 10, 11, 15																					
☒	DAY	MONTCALM	1934	MICHIGAN STRAY	1352	4 S		MARSHALL	1395	2	ABANDONED 1944							8,494	80				
		DAY TWP., 11N-6W, SECTION 1; HOME TWP., 12N-6W, SECTION 36																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ● ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☼ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

	FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	OIL PRODUCTION - BBLS.: CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	GAS PRODUCTION - Mcf.: CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	DISPOSAL SURFACE	TOTAL BBLS. DAY
●	DAY	MONTCALM	1946	TRAVERSE	2900	2 L	43.0	DUNDEE	3387	1	ABANDONED 1967												
●			1946	DUNDEE	3337	2 L				2	ABANDONED 1954					16,239			20	812			
		DAY TWP., 11N-6W, SECTION 25 (Traverse); DAY TWP., 11N-6W, SECTION 36 (Dundee)																					
☼	DEEP RIVER	ARENAC	1936	BEREA	1490	10 S		SYLVANIA	4311	12	0	0	3	1			0	1,609,812	1520		DOMESTIC USE		
		DEEP RIVER TWP., 19N-4E, SECTIONS 7, 8, 16, 17, 18, 20																					
●	DEEP RIVER	ARENAC	1944	DUNDEE	2795	145 D	35.8	RICHFIELD	4258	106	0	0	41	11	79,897	26,253,431			1060	24767	7485	0	7485
●			1953	RICHFIELD	(CONSOLIDATED WITH STERLING DETROIT RIVER-RICHFIELD IN 1954)								THE 41 WELLS INCLUDE 40 DUNDEE AND 1 TRAVERSE										
		DEEP RIVER TWP., 19N-4E, SECTIONS 6, 7, 8, 9, 14, 15, 16, 23, 24																					
●	DEERFIELD	MONROE	1920	TRENTON	2115	10 L	42.7	CAMBRIAN	3250	47	0	1	20	12	3,701	706,475			450	1570	1	*30	31
		DUNDEE TWP., 6S-6E, SECTIONS 19, 29, 30; SUMMERFIELD TWP., 6S-6E, SECTION 31																					
☼	DEMINGS LAKE	LENAWEE	1968	TRAVERSE	734	L		TRAVERSE	741	1	1	0	1	1			0	0	40				
		DOVER TWP., 7S-2E, SECTION 27																					
●	DENNISON	OTTAWA	1963	TRAVERSE	1874	4 L	38.0	SALINA	3202	15	0	1	9	7	7,426	310,553			300	1035	25	0	25
		POLKTON TWP., 8N-14W, SECTIONS 21, 27, 28																					
☼	DIAMOND CRYSTAL SALT	ST. CLAIR	1927	NIAGARAN	2483	17 D		NIAGARAN	2500	1	ABANDONED 1931							136,445	40				
		ST. CLAIR TWP., 5N-17E, SECTION 31																					
●	DIAMOND SPRINGS	ALLEGAN	1938	TRAVERSE	1461	3 L	41.0	SALINA	2651	56	0	0	8		3,343	1,002,561			420	2387	157	1	158
●			1958	SALINA-E ZONE	2389	21 D				3	0	0	3		3,014	52,665			30	1755	0	*150	150
		OVERISEL TWP., 4N-14W, SECTION 36; SALEM TWP., 4N-13W, SECTION 31; HEATH TWP., 3N-14W, SECTION 1; MONTEREY TWP., 3N-13W, SECTION 6																					
●	DORR	ALLEGAN	1938	TRAVERSE	1617	4 L	41.0	NIAGARAN	3319	41	0	0	4		1,423	417,757			410	1019	0	13	13
●			1955	DETROIT RIVER	2082	6 D	38.0			14	0	0	4		1,291	71,505			260	255	18	6	24
●			1956	SALINA	2922	7 D	17.0			18	0	0	12		7,048	287,399	47,480	1,097,498	540	532	45	14	59
		DORR TWP., 4N-12W, SECTIONS 19, 29, 30, 31, 32, 33; SALEM TWP., 4N-13W, SECTION 25																					
☼	DORR	ALLEGAN	1957	DETROIT RIVER	1918	1 D		NIAGARAN	3319	1	0	0	1	1			0	4,710	160				
		DORR TWP., 4N-12W, SECTION 33																					
☼	DORR, SEC. 17	ALLEGAN	1951	"BEREA"	953	8 D		TRAVERSE	1642	1	ABANDONED 1967							0	40				
		DORR TWP., 4N-12W, SECTION 17																					
☼	DORR, SEC. 21	ALLEGAN	1940	"BEREA"	957	1 D		TRAVERSE	1687	1	0	0	1				0	0	40		DOMESTIC USE		
		DORR TWP., 4N-12W, SECTION 21																					
●	DOUGLASS	MONTCALM	1945	DUNDEE	3400	2 L	47.1	DUNDEE	3458	6	0	0	1		1,039	246,062			120	2051	175	0	175
		DOUGLASS TWP., 11N-7W, SECTION 1																					
☼	DOUGLASS	MONTCALM	1943	MICHIGAN STRAY	1190	5 S		DUNDEE	3423	4	ABANDONED 1951							184,806	640				
		DOUGLASS TWP., 11N-7W, SECTIONS 27, 28																					
●	DOUGLASS, SEC. 3	MONTCALM	1954	TRAVERSE	3025	8 L		DUNDEE	3666	1	ABANDONED 1956					3,155			20	158			
		DOUGLASS TWP., 11N-7W, SECTION 3																					
●	DUNNINGVILLE	ALLEGAN	1950	TRAVERSE	1435	3 L	38.0	TRAVERSE	1438	5	0	0	1		493	118,970			50	2379	40	0	40
		HEATH TWP., 3N-14W, SECTIONS 22, 27, 33																					
●	DWIGHT	HURON	1945	DETROIT RIVER	2862	4 L	36.2	SYLVANIA	3290	1	0	0	1		1,215	39,393			40	984	2	0	2
		DWIGHT TWP., 18N-13E, SECTION 21																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ● ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☼ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

	FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	OIL PRODUCTION - BBLS.: CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	GAS PRODUCTION - Mcf.: CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	DISPOSAL SURFACE	TOTAL BBLS. DAY
●	EAST NORWICH	MISSAUKEE-ROSCOMMON	1944	TRAVERSE	2410	1 L		BASS ISLANDS	5520	1	ABANDONED 1944 PRODUCTION COMBINED WITH EAST NORWICH RICHFIELD												
●			1942	DUNDEE	3082	4 L	44.2			1	ABANDONED 1947 PRODUCTION COMBINED WITH EAST NORWICH RICHFIELD												
●			1942	RICHFIELD	4390	14 D	40.9			109	0	5	74	4	219,434	7,827,350	321,719	4,965,622	4360	1795			
		NORWICH TWP., 24N-5W, SECTION 16 (Traverse), SEC. 14 (Dundee); LYON TWP., 24N-4W, SECTIONS 6, 7, 18 (Richfield)													THE 74 WELLS INCLUDE 64 RICHFIELD AND 9 SOUR ZONE & 1 RICHFIELD & SOUR ZONE									
		NORWICH TWP., 24N-5W, SECTIONS 1, 2, 3, 9, 10, 11, 12, 13, 14, 15, 16, 21, 22, (Richfield)																					
●	EDEN	MASON	1948	TRAVERSE	1679	3 L	34.5	CAMBRIAN	7249	10	0	0	5	4					90		70	0	70
☼			1958	TRAVERSE	1960	7 L				1	0	0	1	1			0	0	160				
●			1948	DUNDEE	2240	2 L	45.3			38	0	0	28	15					380		1024	0	1024
●			1948	REED CITY	2345	8 D	42.8			5	0	0	2	1	17,428	2,907,729	0	275,801	40	5701	3	0	3
		EDEN TWP., 17N-16W, SECTION 26 (Traverse Gas) SECTIONS 25, 26, 35, 36 (Traverse, Dundee, Reed City Oil Combined In Above Figures)																					
●	EDENVILLE	MIDLAND	1938	DUNDEE	3790	8 L	41.0	DUNDEE	3962	36	0	0	1		939	1,364,038			370	3686	10	0	10
		EDENVILLE TWP.,16N-1W, SECTIONS 5, 26, 27																					
☼	EDENVILLE, SEC. 5	MIDLAND	1956	SAGINAW FM.	382	12 S		DUNDEE	4028	3	0	0	2	2			0	0	160				
		EDENVILLE TWP., 16N-1W, SECTION 5																					
●	EDMORE	MONTCALM	1933	TRAVERSE	3102	4 L	43.2	DUNDEE	3613	35	0	5	10		15,086	1,336,947	0	1,094,960	500	2673	765	0	765
		ROME TWP., 12N-6W, SECTIONS 2, 3, 9, 10, 11																					
⊖	EDMORE-RICKLAND	REFER TO TABLE 6 UNDEVELOPED GAS STORAGE RESERVOIRS																					
●	EDWARDS	OGEMAW	1951	DUNDEE	3362	10 L		SYLVANIA-BOIS BLANC	5260	4	1	0	3		8,492	24,812			90	276	625	0	625
		EDWARDS TWP., 21N-1E, SECTION 15																					
☼	EGELSTON	MUSKEGON	1951	"BEREA"	1120	5 D		DUNDEE	2282	7	ABANDONED 1966							291,097	1120				
		EGELSTON TWP., 10N-15W, SECTIONS 3, 4, 9, 10, 15																					
☼	ELBA	GRATIOT	1928	MICHIGAN STRAY	670	10 S		DUNDEE	3044	10	ABANDONED 1957							246,058	520				
●			1927	TRAVERSE	2440	2 L	47.0			6	ABANDONED 1962					42,925			90	477			
		ELBA TWP., 9N-1W, SECTIONS 9, 14, 15, 16 (Michigan Stray); ELBA TWP., 9N-1W, SECTIONS 14, 15, 22, 23																					
●	ELBRIDGE	OCEANA	1961	TRAVERSE	2112	2 L	39.4	REED CITY	2725	19	0	5	11	3	5,752	414,945			380	1092	1408	0	1408
		ELBRIDGE TWP., 15N-16W, SECTIONS 22, 26, 27, 28																					
●	ELKLAND	TUSCOLA	1946	DUNDEE	2653	14 L		SYLVANIA	3735	2	ABANDONED 1947					1,546			20	77			
		ELKLAND TWP., 14N-11E, SECTION 31; NOVESTA TWP., 13N-11E, SECTION 6																					
●	ELMWOOD	TUSCOLA	1945	DUNDEE	2740	8 L	31.3	BOIS BLANC	3945	10	0	0	7	1	4,089	72,071			90	801	33	0	33
		ELMWOOD TWP., 14N-10E, SECTIONS 17, 20, 21																					
☼	ENSLEY	NEWAYGO	1958	MARSHALL	826	5 S		DETROIT RIVER	3018	8	0	0	8	8			0	906,626	1280		MAY CONVERT TO STORAGE		
●			1954	TRAVERSE	2439	2 L				6	ABANDONED 1959					70,415			120	587			
		ENSLEY TWP., 11N-11W, SECTIONS 6, 7, 8, 17, 18 (Marshall); ENSLEY TWP., 11N-11W, SECTIONS 6, 7, 8 (Traverse)																					
●	ENTERPRISE	MISSAUKEE-ROSCOMMON	1943	RICHFIELD	4405	15 D	41.8	RICHFIELD	4625	32	0	0	20		74,647	2,157,063	40,776	666,442	1280	1685	26	0	26
		ENTERPRISE TWP., 23N-5W, SECTIONS 10, 11, 12, 13, 14; LAKE TWP., 23N-4W, SECTION 18																					
☼	ENTERPRISE, SEC. 32	MISSAUKEE	1953	MICHIGAN STRAY	1986	5 S		DETROIT RIVER	4200	2	0	0	2	1			0	0	320		DOMESTIC USE		
		ENTERPRISE TWP., 23N-5W, SECTION 32; BUTTERFIELD TWP., 22N-5W, SECTION 4																					
●	ENTRICAN	MONTCALM	1966	TRAVERSE	2870	4 L		DUNDEE	3426	1	0	1	0	ABANDONED 1968					40				
●			1967	DUNDEE	3312	2 D				1	0	0	1		1,599	3,710			40	46	600	0	600
		DOUGLASS TWP., 11N-7W, SECTION 21																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☼ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

	FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	OIL PRODUCTION - BBLS.: CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	GAS PRODUCTION - Mcf.: CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	BRINE PRODUCTION: DISPOSAL SURFACE	BRINE PRODUCTION: TOTAL BBLS. DAY
●	ESSEXVILLE	BAY	1944	DUNDEE	2835	17 L	35.3	SYLVANIA	4130	50	0	0	41		50,860	3,240,347	0	3,267	1730	1873	110	0	110
		HAMPTON TWP., 14N-6E, SECTIONS 7, 8, 9, 15, 16, 17, 18; HAMPTON TWP., 14N-5E, SECTION 12																					
●	EVART	OSCEOLA	1942	DUNDEE	3755	6 L	46.3	SYLVANIA	5292	29	0	0	3		5,535	3,806,662			1100	3461	650	0	650
		OSCEOLA TWP., 18N-8W, SECTIONS 21, 22, 23, 25, 26, 27, 28																					
⊖	EVART	REFER TO TABLE 6 UNDEVELOPED GAS STORAGE RESERVOIRS																					
●	EXCELSIOR	KALKASKA	1950	TRAVERSE	2003	2 L	33.4	TRAVERSE	2136	1	0	0	1		281	10,455			10	1045	0	0	0
		EXCELSIOR TWP., 27N-6W, SECTION 11																					
☼	FALMOUTH	MISSAUKEE	1962	MICHIGAN STRAY	1279	3 S		REED CITY	4035	8	0	1	3				176,994	1,059,797	1280				
		ARTNA TWP., 22N-6W, SECTIONS 30, 31; REEDER TWP., 22N-7W, SECTIONS 25, 36																					
●	FERRY	OCEANA	1960	TRAVERSE	1949	2 L	41.0	REED CITY	2581	14	0	0	4	4	0	164,263			280	587			
		FERRY TWP., 14N-16W, SECTIONS 16, 20, 21																					
☼	FERRY, SEC. 25	OCEANA	1961	"BEREA"	1310	5 D		REED CITY	2650	1	0	0	1	1			0	0	40				
		FERRY TWP., 14N-16W, SECTION 25																					
●	FILLMORE	ALLEGAN-OTTAWA	1940	TRAVERSE	1516	2.7 L	41.1	NIAGARAN	3045	63	0	0	11		3,861	962,825			770	1250	94	2	96
☼			1959	SALINA A-2 CARB.	2632	16 D	}			11	0	0	11				1,037,729	2,428,520	1500				
☼			1959	SALINA A-1 CARB.	2792	16 D	}			PRODUCTION COMBINED WITH SALINA A2 ABOVE									1600				
		FILLMORE TWP., 4N-15W, SECTIONS 2, 3, 11, 12; HOLLAND TWP., 5N-15W, SECTIONS 22, 34, 35 (Traverse Oil); FILLMORE TWP., SECTIONS 2, 3; AND HOLLAND TWP., SECTIONS 34, 35 (Salina Gas)																					
◐	FOREST RIVER	OCEANA	1965	TRAVERSE	1954	1 L		DUNDEE	2598	1	ABANDONED 1965					667			40	17			
		COLFAX TWP., 16N-15W, SECTION 12																					
●	FORK	MECOSTA	1942	DUNDEE	3845	8 L	49.0	BOIS BLANC	5894	64	0	1	3		2,792	7,777,026			2700	2880	1650	0	1650
◐			1945	RICHFIELD	5001	11 D	54.8			1	ABANDONED 1966			PRODUCTION COMBINED WITH FORK DUNDEE			0	854,415					
		FORK TWP., 16N-7W, SECTIONS 4, 5, 6, 7, 8, 16, 18; CHIPPEWA TWP., 16N-8W, SECTIONS 1, 12																					
☼	FORK, EAST	MECOSTA	1942	MICHIGAN STRAY	1480	5 S		DUNDEE	3865	4	ABANDONED 1946							102,708	640				
		FORK TWP., 16N-7W, SECTIONS 2, 11																					
☼	FORK, NORTH	OSCEOLA	1956	MICHIGAN STRAY	1433	19 S		DUNDEE	3982	1	0	0	1				0	60,178	160		DOMESTIC USE		
●			1951	DUNDEE	3788	3 D	45.8			6	0	0	1	1	0	153,661			120				
		ORIENT TWP., 17N-7W, SECTION 33 (Michigan Stray) SECTIONS 28, 33 (Dundee)																					
☼	FORK, WEST	MECOSTA	1943	MICHIGAN STRAY	1490	5 S		SYLVANIA	5198	17	0	0	2				0	2,405,559	2880		DOMESTIC USE & LEASE FUEL		
		FORK TWP., 16N-7W, SECTIONS 5, 6, 7, 8, 16; CHIPPEWA TWP., 16N-8W, SECTIONS 1, 2; EVART TWP., 12N-8W, SECTIONS 35, 36																					
☼	FORWARD	MISSAUKEE	1961	MICHIGAN STRAY	1393	7 S		DETROIT RIVER	5225	6	0	0	3				30,749	447,118	960				
		RIVERSIDE TWP., 21N-7W, SECTIONS 25, 26; CLAM UNION TWP., 21N-6W, SECTION 31																					
☼	FOUR CORNERS	ST. CLAIR	1966	SALINA-NIAGARAN	2205	212 D		CLINTON	2638	2	0	0	2				186,283	227,126	80				
		CASCO TWP., 4N-15E, SECTION 36; IRA TWP., 3N-15E, SECTION 1																					
☼	FOWLERVILLE	LIVINGSTON	1961	SALINA-NIAGARAN	3880	45 D		PRAIRIE DU CHIEN	5685	2	0	0	2	2					320		SHUT IN		
		HANDY TWP., 3N-3E, SECTIONS 1, 2																					
◐	FREEDOM	WASHTENAW	1954	TRENTON	3963	20 D	43.5	CAMBRO-ORDOVICIAN	4691	1	ABANDONED 1956					7,217			40	180			
		FREEDOM TWP., 3S-4E, SECTION 8																					
⊕	FREEMAN-LINCOLN	REFER TO TABLE 5 DEVELOPED GAS STORAGE RESERVOIRS																					
●	FREEMAN-REDDING	CLARE	1938	DUNDEE	3885	19 L	44.4	SYLVANIA	5462	170	0	0	19	4	30,823	16,526,706			2800	5902	4065	*18	4083
		REDDING TWP., 19N-6W, SECTIONS 27, 28, 29, 32, 33, 34; FREEMAN TWP., 18N-6W, SECTIONS 3, 4																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☼ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

	FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	OIL PRODUCTION - BBLS.: CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	GAS PRODUCTION - Mcf.: CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	BRINE PRODUCTION: DISPOSAL SURFACE	BRINE PRODUCTION: TOTAL BBLS. DAY
◐	FREEMAN SEC. 15	CLARE	1963	DUNDEE	3894	8 L	41.0	DUNDEE	3902	1	ABANDONED 1965					736			40	18			
		FREEMAN TWP., 18N-6W, SECTION 15																					
☼	FREMONT	ISABELLA	1941	MICHIGAN STRAY	1235	5 S		DUNDEE	3556	5	ABANDONED 1956							381,330	800				
◐			1938	DUNDEE	3696	4 D		DUNDEE	3700	2	ABANDONED 1956					3,045			30	102			
		FREMONT TWP., 13N-5W, SECTIONS 20, 21, 22, 27, 28 (Michigan Stray); FREMONT TWP., SECTIONS 5, 8 (Dundee)																					
☼	FREMONT, SEC. 32	ISABELLA	1958	MICHIGAN STRAY	1264	6 S		DUNDEE	3619	1	0	0	1				2,036	24,286	160				
◐			1957	TRAVERSE	3058	2				1	ABANDONED 1958					892			10	89			
		FREMONT TWP., 13N-5W, SECTION 32																					
◐	FREMONT	SAGINAW	1937	DUNDEE	3125	1 L		DUNDEE	3150	2	ABANDONED 1947					2,000			20	100			
		FREMONT TWP., 11N-2E, SECTIONS 3, 5																					
◐	FREEPORT	BARRY	1949	TRAVERSE	2031	3 L		DETROIT RIVER	2430	1	ABANDONED 1951					19,229			10	1923			
		CARLTON TWP., 4N-8W, SECTION 6																					
◐	GARFIELD	CLARE	1946	DETROIT RIVER	5038	10 S		SYLVANIA	5307	1	ABANDONED 1948					13,769		535,811	40	344			
		GARFIELD TWP., 17N-6W, SECTION 18																					
●	GENEVA	MIDLAND	1935	DUNDEE	3671	2 L		DETROIT RIVER	3898	8	0	0	1	1	0	63,143			70	902			
		GENEVA TWP., 15N-2W, SECTIONS 19, 20, 29						ABANDONED IN 1960, REACTIVATED IN 1967															
●	GENEVA	VAN BUREN	1940	TRAVERSE	1042	2 L	31.5	TRENTON	2950	77	0	0	1	1	0	495,063			760	651			
		GENEVA TWP., 1S-16W, SECTIONS 20, 21, 22, 27, 28, 29, 32, 33																					
◐	GIBSON	BAY	1935	TRAVERSE	2036	4 L		DETROIT RIVER	4343	12	ABANDONED 1957					51,898			130	399			
◐			1950	DUNDEE	2942	4 L				1	ABANDONED 1952				PRODUCTION COMBINED WITH GIBSON TRAVERSE								
		GIBSON TWP., 18N-3E, SECTIONS 1, 2, 11, 12; DUNDEE PRODUCTION - SECTION 2																					
●	GIBSON, SEC. 20	BAY	1951	DUNDEE	3097	11 L		DETROIT RIVER	4343	3	0	0	3		1,273	27,780			30	926	0	0	0
		GIBSON TWP., 18N-3E, SECTIONS 20, 29																					
●	GILBERT LAKE	OCEANA	1956	TRAVERSE	2032	8 L	42.5	REED CITY	2711	3	0	0	1	1	0	50,733			30	1691			
		COLFAX TWP., 16N-15W, SECTION 34																					
☼	GILMORE	ISABELLA	1945	MISHIGAN STRAY	1560	3 S		DUNDEE	4091	6	ABANDONED 1952							203,312	520				
		GILMORE TWP., 16N-5W, SECTIONS 25, 26, 36; VERNON TWP., 16N-4W, SECTION 31																					
●	GILMORE	ISABELLA	1955	DUNDEE	3803	3 L	48.6	DUNDEE	3812	12	0	2	4		3,698	372,186			120	3101	1400	0	1400
		GILMORE TWP., 16N-5W, SECTIONS 30, 31, 32; NOTTAWA TWP., 15N-5W, SECTION 5																					
●	GOODWELL	NEWAYGO	1943	TRAVERSE	2760	12 L	43.0	BASS ISLANDS	4342	31	0	0	2		3,632	1,109,941			1240	895	7	5	12
		GOODWELL TWP., 14N-11W, SECTIONS 5, 6, 7, 8, 9, 16, 17																					
⊕	GOODWELL	REFER TO TABLE 5 DEVELOPED GAS STORAGE RESERVOIRS																					
☼	GOODWELL, EAST	NEWAYGO	1945	MICHIGAN STRAY	1190	4 S		DETROIT RIVER	3498	2	ABANDONED 1950							7,504	200				
		GOODWELL TWP., 14N-11W, SECTIONS 23, 24																					
☼	GRANT	MASON	1929	GLACIAL DRIFT	632	1 S		DUNDEE	2385	3	ABANDONED 1955							8,020	120				
		GRANT TWP., 20N-17W, SECTION 15																					
●	GRANT, SEC. 29	HURON	1953	DETROIT RIVER	3358	8 D	38.8	BOIS BLANC	3918	3	0	0	3		638	17,629			120	147	0	*1	1
		GRANT TWP., 15N-11E, SECTION 29																					
☼	GREEN	MECOSTA	1946	MICHIGAN STRAY	1250	3 S		REED CITY	3710	2	ABANDONED 1951							73,368	320				
		GREEN TWP., 16N-10W, SECTION 18																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☼ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	OIL PRODUCTION - BBLS.: CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	GAS PRODUCTION - Mcf.: CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	BRINE PRODUCTION: DISPOSAL SURFACE	BRINE PRODUCTION: TOTAL BBLS. DAY
● GREEN OAK	LIVINGSTON	1967	TRENTON-BLACK RIVER				BLACK RIVER	5560	1	0	0	1		868	1,567			40	39	0	*5	5
	GREEN OAK TWP., 1N-6E, SECTION 14																					
● GREENWOOD, SEC. 3	CLARE	1968	TRAVERSE	3438	14 L		DUNDEE	4048	1	1	0	1		2,216	2,216			20	111	60	0	60
	GREENWOOD TWP., SECTION 3																					
◐ GREENWOOD, SEC. 11	CLARE	1952	DUNDEE	4054	10 L		RICHFIELD	5432	1	ABANDONED 1953					1,324			10	132			
	GREENWOOD TWP., 19N-5W, SECTION 11																					
◐ GROUT	GLADWIN	1940	DUNDEE	3825	4 L		DETROIT RIVER	5240	5	ABANDONED 1957				PRODUCTION COMBINED WITH GROUT RICHFIELD								
◐		1958	DETROIT RIVER SZ	4801	12 D				1	ABANDONED 1963				PRODUCTION COMBINED WITH GROUT RICHFIELD								
●		1956	RICHFIELD	5039	10 D	41.7			17	0	0	13	1	77,116	1,314,967			680	1934	160	*4	164
	GROUT TWP., 18N-2W, SECTIONS 10, 11, 14, 15																					
☼ HAMILTON	CLARE	1940	MICHIGAN STRAY	1270	3 S		RICHFIELD	5395	4	ABANDONED 1954							275,606	440				
◐		1940	DUNDEE	4041	10 L	41.8			3	ABANDONED 1959				PRODUCTION COMBINED WITH HAMILTON RICHFIELD								
●		1952	RICHFIELD	5145	12 D	42.2			45	0	1	27		336,217	4,445,270	157,540	3,146,907	1800	2469	782	0	782
	HAMILTON TWP., 19N-3W, SECTIONS 5, 6, 7, 8, 15; HAYES TWP., 19N-4W, SECTIONS 1, 2; FROST TWP., 20N-4W, SECTIONS 35, 36; MICHIGAN STRAY IN HAMILTON TWP., SECTIONS 15, 23, 26																					
⊕ HAMILTON, NORTH	REFER TO TABLE 5 DEVELOPED GAS STORAGE RESERVOIRS																					
☼ HAMLIN	MASON	1952	SALINA-NIAGARAN	3950	? D		CAMBRIAN	6622	1	ABANDONED 1962							0	160				
◐		1952	NIAGARAN	4224	20 D	46.2			1	ABANDONED 1958					60,532			40	1513			
	HAMLIN TWP., 19N-18W, SECTION 27																					
● HANOVER	JACKSON	1959	TRENTON-BLACK RIVER	4012	120+ D	43.0	PRAIRIE DU CHIEN	4604	10	0	0	10	6	86,748	1,174,698	88,153	398,472	180	6526	284	0	284
	HANOVER TWP., 4S-2W, SECTIONS 8, 9																					
● HARDY DAM	MECOSTA	1966	REED CITY	3351	5 D	44.8	DETROIT RIVER	3482	22	0	1	21	1	257,704	589,091			880	669	998	0	998
	AETNA TWP., 13N-10W, SECTIONS 5, 6, 7, 8																					
☼ HARRISON	CLARE	1945	MICHIGAN STRAY	1675	3 S		SYLVANIA	5633	7	ABANDONED 1962							598,465	760				
●		1945	DUNDEE	4190	13 L	39.7			2	0	0	2		2,834	144,932			80	1811	0	*15	15
	LINCOLN TWP., 18N-5W, SECTIONS 1, 12, 13; HATTON TWP., 18N-4W, SECTIONS 6, 7 (Michigan Stray); DUNDEE IN HATTON TWP., SECTION 7																					
◐ HART	OCEANA	1933	TRAVERSE	1911	54 D	34.0	ST. PETER Ss	5531	17	ABANDONED 1936					116,275			150	775			
	HART TWP., 15N-17W, SECTION 36; ELBRIDGE TWP., 15N-16W, SECTION 31																					
☼ HARTWICK	OSCEOLA	1968	MICHIGAN STRAY	1681	25 S		MICHIGAN STRAY	1706	1	1	0	1	1					160				
	HARTWICK TWP., 19N-8W, SECTION 11																					
◐ HATTON	CLARE	1941	DUNDEE	3945	2 L		DUNDEE	4000	4	ABANDONED 1948					139,272			160	870			
	HATTON TWP., 18N-4W, SECTION 31; LINCOLN TWP., 18N-5W, SECTION 36																					
◐ HAWKHEAD	ALLEGAN	1946	TRAVERSE	1103	1 L	36.0	DETROIT RIVER	1385	16	ABANDONED 1960					68,292			160	427			
	CASCO TWP., 1N-16W, SECTIONS 20, 29																					
☼ HEADQUARTERS	CLARE-ROSCOMMON	1945	MICHIGAN STRAY	1340	6 S		BOIS BLANC	5929	12	0	0	2	2					1760				
●		1941	TRAVERSE	3356	5 L	42.3			47	0	0	5						1400		710	0	710
●		1958	DUNDEE	3899	12	39.9			1	0	0	1						10		0	2	2
●		1942	DETROIT RIVER SZ	4946	13 D	43.7	}															
●		1958	RICHFIELD	5147	23 D	42.6	}		60	0	0	54	17	68,667	10,030,067	0	4,848,560	2320	2689	0	17	17
	ROSCOMMON TWP., 21N-3W, SECTIONS 17, 19, 20, 21, 28, 29, 30, 32, 33, 34; FRANKLIN TWP., 20N-3W, SECTION 3, 4, 10, 11, 15													THE 54 WELLS INCLUDE 22 RICHFIELD, 25 SOUR ZONE AND 7 RICHFIELD & SOUR ZONE									

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☼ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	OIL PRODUCTION - BBLS.: CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	GAS PRODUCTION - Mcf.: CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	BRINE PRODUCTION: DISPOSAL SURFACE	BRINE PRODUCTION: TOTAL BBLS. DAY
● HEATH	ALLEGAN	1948	TRAVERSE	1498	2 L	38.0	SALINA	2716	25	0	1	4		1,192	204,267			270	757	0	4	4
	HEATH TWP., 3N-14W, SECTIONS 11, 12, 13, 14																					
☼ HEATH, SEC. 21	ALLEGAN	1960	SALINA	2492	19 D		SALINA	2789	1	ABANDONED 1965							63,430	160				
	HEATH TWP., 3N-14W, SECTION 21																					
● HEATH, SEC. 35	ALLEGAN	1945	TRAVERSE	1468	2 L		TRAVERSE	1470	1	ABANDONED 1946					559			10	56			
	HEATH TWP., 3N-14W, SECTION 35																					
☼ HESSEN	ST. CLAIR	1965	NIAGARAN	2499	261 D		NIAGARAN	2887	16	1	0	16	2	21,854	51,053	3,209,373	4,922,193	640	80	47	0	47
	CASCO TWP., 4N-15E, SECTIONS 2, 3, 10, 11; COLUMBUS TWP., 5N-15E, SECTIONS 34, 35																					
● HILLIARDS	ALLEGAN	1944	TRAVERSE	1576	1.2 L		NIAGARAN	3157	17	ABANDONED 1961					124,401			300	415			
☼		1958	SALINA A-1 CARB.	2938	30 D				6	0	0	6	3	827	8,300	57,695	1,993,258	960	9			
	HOPKINS TWP., 3N-12W, SECTIONS 4, 5 (Traverse); DORR TWP., 4N-12W, SECTION 34; HOPKINS TWP., 3N-12W, SECTIONS 3, 4, 10 (Salina)																					
● HOLTON	MUSKEGON	1948	TRAVERSE	1993	1 L	37.3	DUNDEE	2554	3	ABANDONED 1963					95,911			60	1598			
	HOLTON TWP., 12N-15W, SECTIONS 4, 9																					
● HOME, SEC. 26	MONTCALM	1964	TRAVERSE	3096	10 L	45.3	REED CITY	3618	1	0	0	1		248	1,279			10	127	0	2	2
	HOME TWP., 12N-6W, SECTION 26																					
● HOPE	BARRY	1939	TRAVERSE	1869	3 L	37.6	PRAIRIE DU CHIEN	4944	66	0	0	37	1	10,713	598,659			650	912	0	5	5
	HOPE TWP., 2N-9W, SECTIONS 26, 27, 28, 33, 34, 35; BARRY TWP., 1N-9W, SECTIONS 1, 2, 3, 12																					
◐ HOPKINS	ALLEGAN	1939	TRAVERSE	1633	4 L	41.5	DETROIT RIVER	1965	10	ABANDONED 1956					145,513			110	1323			
	HOPKINS TWP., 3N-12W, SECTIONS 22, 23																					
● HOPKINS, SOUTH	ALLEGAN	1948	TRAVERSE	1538	3 L	38.0	TRAVERSE	1611	35	0	0	2		615	266,662			330	808	0	4	4
	HOPKINS TWP., 3N-12W, SECTIONS 19, 30, 31, 32																					
● HOPKINS, WEST	ALLEGAN	1941	TRAVERSE	1371	2 L	41.5	CLINTON	3140	31	ABANDONED 1951					388,777			370	1051			
◐		1956	SALINA	2755	7 D	17.9			2	0	1	0			1,849	ABANDONED 1968		20	92			
	HOPKINS TWP., 3N-12W, SECTIONS 7, 18																					
⊕ HOWELL	REFER TO TABLE 5 DEVELOPED GAS STORAGE RESERVOIRS																					
◐ HUBBARDSTON	IONIA	1947	DUNDEE	3028	5 L		DUNDEE	3072	5	ABANDONED 1959					48,479			50	970			
	NORTH PLAINS TWP., 8N-3W, SECTION 4																					
● HUBER	NEWAYGO	1955	TRAVERSE	2109	2 L	41.3	DETROIT RIVER	3400	13	0	1	5	2	2,721	546,271			260	2101	295	0	295
	DENVER TWP., 14N-14W, SECTIONS 4, 5, 8																					
⊕ IRA	REFER TO TABLE 5 DEVELOPED GAS STORAGE RESERVOIRS																					
☼ ISABELLA	ISABELLA	1949	MICHIGAN STRAY	1454	7 S		DETROIT RIVER	3993	6	ABANDONED 1956							335,791	240				
●		1948	DUNDEE	3783	9 D	46.9			20	0	0	1		680	823,056	0	138,559	370	2224	0	0	0
	ISABELLA TWP., 15N-4W, SECTIONS 7, 18 (Michigan Stray); ISABELLA TWP., SECTIONS 7, 18; NOTTAWA TWP., 15N-5W, SECTIONS 12, 13 (Dundee)																					
☼ ITHACA	GRATIOT	1943	MICHIGAN STRAY	900	16 S		DUNDEE	3419	5	ABANDONED 1965							1,520,995	800				
	ARCADIA TWP., 11N-3W, SECTIONS 25, 35, 36																					
● JEFFERSON	CASS	1961	TRAVERSE	710	3 L	32.0	PRAIRIE DU CHIEN	2603	20	0	0	7	3	1,055	100,267			400	251	275	0	275
	JEFFERSON TWP., 7S-15W, SECTIONS 22, 23, 26, 27, 35																					
● JEROME	MIDLAND	1947	DUNDEE	3743	10 L	39.0	DETROIT RIVER	4001	12	0	0	3	1	2,534	229,176			260	881	2	0	2
	JEROME TWP., 15N-1W, SECTIONS 6, 7, 8																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☒ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

	FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	OIL PRODUCTION - BBLS.: CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	GAS PRODUCTION - Mcf.: CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	BRINE PRODUCTION: DISPOSAL SURFACE	BRINE PRODUCTION: TOTAL BBLS. DAY
●	JOHNSTOWN	BARRY	1951	TRAVERSE	1870	2 L	37.0	TRAVERSE	1899	5	0	0	2		1,175	27,517			50	550	0	0	0
		JOHNSTOWN TWP.,1N-8W, SECTIONS 7, 8, 17																					
●	KAWKAWLIN	BAY	1941	BEREA	1505	4 S	38.0	ST. PETER Ss	10,477	4	0	0	4	1					40		0	0	0
●			1938	DUNDEE	2830	45 L	35.0			320	0	1	296	6			0	4,590	6400		479	27	506
●			1939	DETROIT RIVER	3515	5 D	42.0			8	1	0	7	1	240,000	13,728,304			280		0	0	0
☒			1941	SALINA	7760	16 D				1	ABANDONED 1946							NO RECORD					
		MONITOR TWP., 14N-4E, SECTION 2 (Salina); KAWKAWLIN TWP., 15N-4E, SECTIONS 26, 27, 28, 29, 33, 34, 35, 36; MONITOR TWP., 14N-4E, SECTIONS 1, 2, 3, 11, 12; BANGOR TWP., 14N-5E, SECTIONS 4, 5, 6, 7, 8, 9,; BANGOR TWP., 15N-5E, SECTION 31																					
●	KIMBALL LAKE	NEWAYGO	1947	TRAVERSE	2332	6 L	43.0	ST. PETER Ss	6689	106	0	0	3		1,067	6,221,335	0	2,123,316	2120	2934	0	*1680	1680
●			1955	REED CITY	2852	37 ?	39.2			2	0	0	1						20 USED FOR GAS TO OPERATE TRAVERSE WELLS				
		GARFIELD TWP., 12N-13W, SECTIONS 2, 10, 11, 12, 13, 14, 15, 24																					
◐	LACOTA	VAN BUREN GENEVA TWP., 1S-16W, SECTIONS 9, 10	1946	TRAVERSE	1110	2 L		TRAVERSE	1208	11	ABANDONED 1955					51,904			120	433			
◐	LAKEFIELD	SAGINAW	1937	DUNDEE	3185	12 L	39.0	DUNDEE	3197	1	0	0	1		797	26,070			10	2607	0	0	0
		LAKEFIELD TWP., 11N-1E, SECTION 1																					
●	LAKETON	MUSKEGON	1965	TRAVERSE	1698	4 L	41.4	REED CITY	2199	8	1	1	7		65,002	152,723			200	764	44	0	44
		LAKETON TWP., 10N-17W, SECTIONS 10, 15																					
●	LAKEVIEW	MONTCALM	1961	TRAVERSE	2941	4 L	42.5	REED CITY	3495	2	0	0	2		811	7,333			20	367	0	0	0
		CATO TWP., 12N-8W, SECTION 22																					
●	LAKE GEORGE	CLARE	1954	DUNDEE	3968	2 L	43.8	DUNDEE	3997	10	0	4	3	1	4,772	347,209			100	3472	300	0	300
		LINCOLN TWP., 18N-5W, SECTION 6																					
◐	LARKIN	MIDLAND	1935	BEREA	2473	4 S	39.0	DUNDEE	3829	2	ABANDONED 1945					7,070			20	353			
		LARKIN TWP., 15N-2E, SECTIONS 21, 32																					
●	LAWTON	VAN BUREN	1939	TRAVERSE	1140	1 L	37.5	TRENTON	2775	65	0	3	8	1	1,465	207,414			650	319	12	2	14
		PORTER TWP., 4S-13W, SECTIONS 5, 8, 17, 18, 19, 20; DECATUR TWP., 4S-14W, SECTION 24																					
☒	LEATON	ISABELLA	1935	MICHIGAN STRAY	1240	2 S		DUNDEE	3710	5	ABANDONED 1940							185,609	400				
●			1929	DUNDEE	3657	7.5 L	43.0	DETROIT RIVER	4390	40	0	0	2		4,764	1,747,962			500	3496	125	0	125
		DENVER TWP., 15N-3W, SECTIONS 17, 19 (Michigan Stray); DENVER TWP., SECTIONS 19, 30, 31; ISABELLA TWP., 15N-4W, SECTIONS 24, 25 (Dundee)																					
◐	LEBANON	CLINTON	1948	TRAVERSE	2548	1 L		TRAVERSE	2570	1	ABANDONED 1950					1,036			10	104			
		LEBANON TWP., 8N-4W, SECTION 34																					
◐	LEE	ALLEGAN	1941	TRAVERSE	1170	1 L		TRAVERSE	1207	6	ABANDONED 1952					3,030			60	51			
		LEE TWP., 1N-15W, SECTIONS 18, 19; CASCO TWP., 1N-16W, SECTION 13																					
◐	LEE, SOUTH	ALLEGAN	1949	TRAVERSE	1171	1 L		TRENTON	2960	12	ABANDONED 1953					91,117			120	759			
		LEE TWP., 1N-15W, SECTION 31; CASCO TWP., 1N-16W, SECTION 36																					
⊕	LENOX	REFER TO TABLE 5 DEVELOPED GAS STORAGE RESERVOIRS																					
☼	LEONARD	OAKLAND	1963	NIAGARAN	4245	21 D		CLINTON	4450	2	1	0	2	2					80				
		ADDISON TWP., 5N-11E, SECTION 15																					
●	LEROY	OSCEOLA	1965	REED CITY	3796	4 D		REED CITY	3800	2	0	0	2		4,946	18,979			80	237	0	0	0
		LEROY TWP., 19N-10W, SECTION 27																					
◐	LIME LAKE	HILLSDALE	1960	PRAIRIE DU CHIEN	3461	5 D	44.6	PRAIRIE DU CHIEN	3533	1	ABANDONED 1965					7,842			20	392			
		WRIGHT TWP., 8S-1W, SECTION 11																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☒ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

	FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	OIL PRODUCTION - BBLS.: CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	GAS PRODUCTION - Mcf.: CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	BRINE PRODUCTION: DISPOSAL SURFACE	BRINE PRODUCTION: TOTAL BBLS. DAY
●	LINCOLN, SEC. 18	ARENAC	1957	TRAVERSE	2717	1 L		DUNDEE	3062	2	0	0	2		COMBINED WITH SECTION 31 PRODUCTION				20		0	0	0
		LINCOLN TWP., 18N-4E, SECTION 18																					
◐	LINCOLN, SEC. 31	ARENAC	1963	DUNDEE	2942	10 D	34.9	DUNDEE	2986	1	0	1	0		149	2,375	ABANDONED 1968		10	237			
		LINCOLN TWP., 18N-4E, SECTION 31																					
☼	LOGAN	MASON	1941	RICHFIELD	3260	5 S		RICHFIELD	3330	2	0	0	2	2		228	0	13,289	80				
		LOGAN TWP., 17N-15W, SECTIONS 9, 16																					
☼	LOGAN	OGEMAW	1949	WEIR	1230	11 S		RICHFIELD	4537	PRODUCTION COMBINED WITH BEREA													
☼			1944	BEREA	1420	6 S				16	0	0	14	2			177,575	663,553	2240				
		LOGAN TWP., 22N-4E, SECTIONS 16, 17, 18, 20, 23, 25; CHURCHILL TWP., 22N-3E, SECTIONS 1, 12																					
●	LUCHT	BAY	1949	TRAVERSE	2230	3 L	37.2	DUNDEE	3240	5	0	0	1		992	191,102			50	3822			
		PINCONNING TWP., 17N-4E, SECTION 29																					
●	LUTHER	LAKE	1965	TRAVERSE	2565	2 L	42.0	REED CITY	3362	1	0	0	1		988	27,498			20	1375	275	0	275
		NEWKIRK TWP., 19N-12W, SECTION 14																					
☼	LYNDON	WASHTENAW-LIVINGSTON	1958	TRAVERSE	1311	6 D		TRENTON	4702	6	0	0	6				66,848	375,600	960				
☼			1959	DETROIT RIVER	1733	11 D				PRODUCTION COMBINED WITH TRAVERSE													
		LYNDON TWP., 1S-3E, SECTIONS 6, 7; UNADILLA TWP., 1N-3E, SECTION 31																					
●	MACON CREEK	LENAWEE	1961	TRENTON-BLACK RIVER	2548	36+ D		TRENTON-BLACK RIVER	3303	1	0	0	1		154	783			40	20	0	0	0
		MACON TWP., 5S-5E, SECTION 23																					
☒	MANISTEE	MANISTEE	1959	SALINA	3616	94 D		NIAGARAN	4165	1	ABANDONED 1961							0	160				
		FILER TWP., 21N-17W, SECTION 24																					
☼	MAPLE VALLEY, SEC.16	MONTCALM	1958	MICHIGAN STRAY	1120	5 S		REED CITY	3365	1	0	0	1					0	160		DOMESTIC USE		
		MAPLE VALLEY TWP., 11N-9W, SECTION 16																					
●	MARATHON	LAPEER	1955	BEREA	1449	18 S		BEREA	1467	4	0	0	4	4	0	186			40	5			
		MARATHON TWP., 9N-9E, SECTION 16																					
●	MARINE CITY	ST. CLAIR	1955	SALINA-NIAGARAN	2176	21 D	38.0	CLINTON	2428	18	0	0	14	3	26,907	277,200	392,290	3,065,467	660	420	86	0	86
		COTTRELLVILLE TWP., 3N-16E, SECTIONS 2, 3, 10, 11, 15																					
●	MARINE CITY, SOUTH	ST. CLAIR	1962	SALINA-NIAGARAN	2100	4 D	38.7	NIAGARAN	2251	10	0	0	9	3	11,155	76,755			400	192	25	0	25
			1962	SALINA A-1 CARB.	2100	4 D											96,322	644,067					
		COTTRELLVILLE TWP., 3N-16E, SECTIONS 23, 26																					
⊕	MARION(Winterfield)	REFER TO TABLE 5 DEVELOPED GAS STORAGE RESERVOIRS																					
◐	MARNE	OTTAWA	1940	"BEREA"	1170	3 L		TRAVERSE	1904	2	ABANDONED 1946					6,253			20	313			
		TALLMADGE TWP., 7N-13W, SECTION 5; WRIGHT TWP., 8N-13W, SECTION 32																					
☼	MARSAC CREEK	ST. CLAIR	1965	SALINA-NIAGARAN	2850	190 D		CLINTON	2903	5	0	0	5	2	215	1,681	484,463	1,399,850	200	8	10	0	10
		CASCO TWP., 4N-15E, SECTIONS 29, 30						ONE WELL PRODUCING OIL AND GAS															
◐	MARTIN	ALLEGAN	1948	TRAVERSE	1617	1 L	36.0	ST. PETER Ss	4290	2	ABANDONED 1960					2,188			20	109			
		MARTIN TWP., 2N-11W, SECTION 18																					
☼	MARTINY	MECOSTA	1934	MICHIGAN STRAY	1370	2 S		DETROIT RIVER	3807	5	0	0	4				19,568	1,140,607	680				
		MARTINY TWP., 15N-8W, SECTIONS 12, 22, 23																					
●	MCBAIN	MISSAUKEE	1959	DUNDEE	3969	15 L	45.0	DUNDEE	3973	24	0	0	23	1	127,992	2,582,613			920	2807	6304	0	6304
		RIVERSIDE TWP., 21N-7W, SECTIONS 19, 20, 30; RICHLAND TWP., 21N-8W, SECTION 24																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ● ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☼ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	OIL PRODUCTION - BBLS.: CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	GAS PRODUCTION - Mcf.: CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	BRINE PRODUCTION: DISPOSAL SURFACE	BRINE PRODUCTION: TOTAL BBLS. DAY
☼ MCKAY	CLARE	1929	MICHIGAN STRAY	1400	3 S		DETROIT RIVER	4055	9	0	0	2	1				712,626	360	DOMESTIC USE			
	GRANT TWP., 17N-4W, SECTION 6; SURREY TWP., 17N-5W, SECTION 1; HATTON TWP., 18N-4W, SECTION 31																					
● MEARS	OCEANA	1951	TRAVERSE	1745	2.5 LL	36.1	REED CITY	2347	11	ABANDONED 1959					105,807			110	622			
●		1949	DUNDEE	2210	3 L	32.2			3	ABANDONED 1959					PRODUCTION COMBINED WITH MEARS TRAVERSE							
	GOLDEN TWP., 15N-18W, SECTIONS 34, 35																					
● MEDINA	LENAWEE	1961	TRENTON-BLACK RIVER	2921	18 D	40	PRAIRIE DU CHIEN	3847	1	0	0	1	1	0	4,324			40	108			
	MEDINA TWP., 8S-1E, SECTION 3																					
☼ MECOSTA	MECOSTA	1966	MICHIGAN STRAY	1345	10 S		DUNDEE	3709	2	0	0	2				71,382	71,382	320				
	MORTON TWP., 14N-8W, SECTION 10																					
☼ MECOSTA LAKE	MECOSTA	1953	MICHIGAN STRAY	1314	12 S		DUNDEE	3690	2	ABANDONED 1956							84,071	320				
	MORTON TWP., 14N-8W, SECTIONS 17, 20																					
☼ MIDDLE BRANCH	OSCEOLA	1964	MICHIGAN STRAY	1630	10 S		DETROIT RIVER	4283	4	0	1	3	1			8,990	226,532	640				
	MIDDLE BRANCH TWP., 19N-7W, SECTIONS 17, 18																					
● MILLS, SEC. 1	MIDLAND	1957	DUNDEE	3450	2		DUNDEE	3463	1	0	0	1		422	7,675			10	767	0	0	0
	MILLS TWP., 16N-2E, SECTION 1																					
☼ MINERAL SPRINGS	OSCEOLA	1952	MICHIGAN STRAY	1397	3 S		DETROIT RIVER	3963	4	ABANDONED 1960							288,762	480				
●		1951	DUNDEE	3854	7 D	44.5			12	0	1	1		1,161	298,177			240	1242	25	0	25
	SHERMAN TWP., 20N-9W, SECTIONS 16, 20, 21																					
● MIO	OGEMAW-OSCODA	1946	RICHFIELD	4219	6 D	32.9	CLINTON	8544	4	0	0	2		1,570	51,048			160	319	0	0	0
	MENTOR TWP., 25N-3E, SECTIONS 30, 32; ROSE TWP., 24N-3E, SECTIONS 3, 4																					
● MOFFATT, SEC. 34	ARENAC	1964	TRAVERSE	2100	4 D		DUNDEE	3027	1	0	0	1	1	0	357			10	36			
●		1953	DUNDEE	2984	4 L				1	ABANDONED 1956					8,392			10	839			
	MOFFATT TWP., 20N-3E, SECTION 34																					
☼ MONTAGUE	MUSKEGON	1953	SALINA-NIAGARAN	3734?	80 D		TRENTON	4517	3	0	0	2	1				41,482	480		DOMESTIC USE		
	MONTAGUE TWP., 12N-17W, SECTION 7; WHITE RIVER TWP., 12N-18W, SECTION 12																					
● MONTEREY	ALLEGAN	1938	TRAVERSE	1618	3 L	37.6	CINCINNATIAN	3866	99	0	0	11		2,989	1,003,551			1030	974	0	4	4
	MONTEREY TWP., 3N-13W, SECTIONS 2, 4, 8, 9, 10, 11, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 27, 32, 36																					
☼ MORTON	MECOSTA	1946	MICHIGAN STRAY	1279	2 S		DUNDEE	3691	2	0	0	1					118,377	320		DOMESTIC USE		
	MORTON TWP., 14N-8W, SECTIONS 15, 22																					
☼ MT. CLEMENS	MACOMB	1961	SALINA	2590	18 D		CAMBRIAN ?	4695	1	0	0	1			65			40	2			
	MACOMB TWP., 3N-13E, SECTION 34			ORIGINALLY OIL WELL CONVERTED TO A DOMESTIC GAS WELL 1967																		
● MT. FOREST	BAY	1952	TRAVERSE	2124 2224	2 L 3 L	36.2	RICHFIELD	4305	4	0	0	2						80		22	0	22
●		1947	DUNDEE	3025	9 D	34.1			37	0	0	26	1	10,743	835,568			960	870	0	8	8
	PINCONNING TWP., 17N-4E, SECTIONS 18, 19; MT. FOREST TWP., 17N-3E, SECTIONS 13, 24																					
● MT. FOREST, SEC. 1	BAY	1946	DUNDEE	2960	2 L		DUNDEE	3057	1	ABANDONED 1946					1,906			10	191			
	MT. FOREST TWP., 17N-3E, SECTION 1																					
● MT. HALEY	MIDLAND	1934	DUNDEE	3477	3 D	39.6	DUNDEE	3500	1	ABANDONED 1947					36,069			10	3607			
	MT. HALEY TWP., 13N-1E, SECTION 28																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION: ● ACTIVE OIL FIELD OR POOL ● ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☼ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE: DEPTH IN FEET	PAY ZONE: THICKNESS AND LITHOLOGY	PAY ZONE: OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968: TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS.: PRODUCED IN 1968	OIL PRODUCTION - BBLS.: CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf.: PRODUCED IN 1968	GAS PRODUCTION - Mcf.: CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION: DISPOSAL SUBSURFACE	BRINE PRODUCTION: DISPOSAL SURFACE	BRINE PRODUCTION: TOTAL BBLS. DAY
● MT PLEASANT	ISABELLA-MIDLAND	1928	DUNDEE	3545	15 L	41.8	SYLVANIA	4821	485	0	0	144	8	98,870	27,287,551		7,809,323	5710	4779	1033	51	1084
	GREENDALE TWP., 14N-2W, SECTIONS 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19; LEE TWP., 14N-1W, SECTIONS 7, 8, 18; THE 144 WELLS INCLUDE 139 DUNDEE, 1 TRAVERSE AND 4 DUNDEE & TRAVERSE																					
	CHIPPEWA TWP., 14N-3W, SECTIONS 1, 2, 3, 4, 11, 12, 13; DENVER TWP., 15N-3W, SECTIONS 28, 33, 34																					
☼ MUSKEGON	MUSKEGON	1927	TRAVERSE-DUNDEE-DETROIT RIVER	1640 2025	6 L		ST. PETER Ss	4754	--	0	0	2					7,237,438	1520		DOMESTIC USE & LEASE FUEL		
	MUSKEGON TWP., 10N-16W, SECTIONS 4, 5, 6, 7, 8, 9, 15, 22; LAKETON TWP., 10N-17W, SECTION 12																					
● MUSKEGON	MUSKEGON	1928	TRAVERSE &DUNDEE	1700	3.5 L	37.4	ST. PETER Ss	4754	--	0	2	13		3,821	7,003,325			3170	2209	0	*211	211
	MUSKEGON TWP., 10N-16W, SECTIONS 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 21, 22; LAKETON TWP., 10N-17W, SECTIONS 1, 11, 12, 13, 14																					
☼ MUTTONVILLE	MACOMB	1966	SALINA-NIAGARAN	2576	194 D		CLINTON	3039	7	4	0	7				2,359,406	3,240,247	280		14	0	14
	LENOX TWP., 4N-14E, SECTION 13																					
● NELLSVILLE	ROSCOMMON	1957	DUNDEE	3710	6	40.3	DETROIT RIVER	5165		ABANDONED 1967					16,528			40	413			
●		1956	RICHFIELD	4932	17	42.2				ABANDONED 1967					10,912			10	109			
	ROSCOMMON TWP., 22N-4W, SECTIONS 8, 17																					
☼ NEWARK	GRATIOT	1948	MICHIGAN STRAY	979	5 S		DUNDEE	3255	6	0	4	0				0	441,757	960	ABANDONED 1968			
	NEW HAVEN TWP., 10N-4W, SECTIONS 23, 24, 25, 26																					
● NEW BOSTON	WAYNE	1943	TRENTON	2635	4 L		TRENTON	2983	2	ABANDONED 1949					2,349			20	118			
	HURON TWP., 4S-9E, SECTION 18																					
● NEW LOTHROP	SHIAWASSEE-GENESEE	1967	BEREA	1623	4 S	46	SYLVANIA	3494	12	8	1	11	2	17,999	21,837			240	91	45	0	45
	FLUSHING TWP., 8N-5E, SECTION 7, 18; HAZELTON TWP., 8N-4E, SECTION 1, 12																					
● NEW RICHMOND	ALLEGAN	1965	TRAVERSE	1364	1 L		TRAVERSE	1365	1	ABANDONED 1966					104			10	10			
	MANLIUS TWP., 3N-15W, SECTION 16																					
● NILES	BERRIEN	1940	TRAVERSE	602	7 L	21.5	TRENTON	2089	7	ABANDONED 1958					29,672			70	424			
	NILES TWP., 7S-17W, SECTIONS 1, 2, 3																					
☼ NORTH MORENCY	LENAWEE	1962	TRAVERSE	638	2 D		PRAIRIE DU CHIEN	3284	69	0	0	69	69	0	59	48,763	103,078	2840	FIELD SHUT IN			
	SENECA TWP., 8S-2E, SECTIONS 10, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 27, 28, 29, 30; MEDINA TWP., 8S-1E, SECTIONS 24, 25, 35																					
● NORTH PORTER	CASS	1930	TRAVERSE	660	2 L	37.0	TRENTON	2382	2	ABANDONED 1953					1,424			20	71			
	PORTER TWP., 7S-13W, SECTION 32																					
☼ NORTH STAR	GRATIOT	1940	MICHIGAN STRAY	870	7 S		DUNDEE	3100	1	0	0	1				7,297	559,117	40				
	NORTH STAR TWP., 10N-2W, SECTION 4																					
☼ NORTHVILLE	WASHTENAW-WAYNE-OAKLAND	1948	DUNDEE	788	2 L		CAMBRO-ORDOVICIAN	5850	4	ABANDONED 1961							0	640	DOMESTIC USE			
☼		1937	SALINA-NIAGARAN	2905	2 D							6						1200				
●		1960	NIAGARAN	3515	25 D	42.5										25,041	3,794,518					
●		1954	TRENTON-BLACK RIVER	4395	70 D	39.8						18		28,845	986,783	53,272	14,332,358	2835	348			
	SALEM TWP., 1S-7E, SECTIONS 1, 2; LYON TWP., 1N-7E, SECTION 36 (Dundee); LYON TWP., 1N-7E, SECTIONS 34, 35, 36; SALEM TWP., 1S-7E, SECTIONS 1, 2, 12; TRENTON-BLACK RIVER OIL COMBINED WITH NIAGARAN																					
	NORTHVILLE TWP., 1S-8E, SECTIONS 7, 16, 17; PLYMOUTH TWP., 1S-8E, SECTIONS 21, 22, 23, 25, 26 (Salina-Niagaran and Trenton-Black River)																					
⊕ NORTHVILLE	REFER TO TABLE 5 DEVELOPED GAS STORAGE RESERVOIRS			CONVERTED TO GAS STORAGE AND SECONDARY RECOVERY JULY 2, 1968																		
⊕ ORIENT	REFER TO TABLE 5 DEVELOPED GAS STORAGE RESERVOIRS																					
● OTISVILLE	GENESEE-TUSCOLA	1945	BEREA	1500	3 S	35.5	DUNDEE	2674	9	0	0	5						100		13	0	13
●		1941	TRAVERSE	1895	2 L				1	ABANDONED 1946					PRODUCTION COMBINED WITH DUNDEE AND BEREA							
●		1944	DUNDEE	2450	3 L	37.0			5	0	0	2		2,553	106,757			40	763	1	0	1
	FOREST TWP., 9N-8E, SECTIONS 5, 6, 12; MILLINGTON TWP., 10N-8E, SECTIONS 31, 32 TRAVERSE PRODUCTION IN FOREST TWP., SECTION 5																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☒ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

	FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE DEPTH IN FEET	PAY ZONE THICKNESS AND LITHOLOGY	PAY ZONE OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968 TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS. PRODUCED IN 1968	OIL PRODUCTION - BBLS. CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf. PRODUCED IN 1968	GAS PRODUCTION - Mcf. CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION DISPOSAL SUBSURFACE	DISPOSAL SURFACE	TOTAL BBLS. PER DAY
●	OTSEGO	ALLEGAN	1938	TRAVERSE	1532	1 L		TRAVERSE	1600	6	ABANDONED 1962					2,290			100	23			
		OTSEGO TWP., 1N-13W, SECTION 30; TROWBRIDGE TWP., 1N-13W, SECTION 36																					
☼	OTSEGO	OTSEGO	1940	ANTRIM	1385	4 SH		DUNDEE	3944	9	0	2	4	4			24,340	361,626	840				
		BAGLEY TWP., 30N-3W, SECTIONS 21, 22, 27, 28, 34																					
●	OTSEGO, SEC. 9	ALLEGAN	1950	TRAVERSE	1456	1 L		TRAVERSE	1457	4	ABANDONED 1951					681			40	17			
		OTSEGO TWP., 1N-12W, SECTION 9						FIELD REACTIVATED AND ABANDONED IN 1958															
◐	OTTO, SEC. 30	OCEANA	1958	"BEREA"	1428	9		TRAVERSE	1860	2	ABANDONED 1960							COMBINED WITH OTTO SECTION 32					
◐			1955	TRAVERSE	1857	3					ABANDONED 1960							COMBINED WITH OTTO SECTION 32					
		OTTO TWP., 13N-16W, SECTIONS 19,30																					
●	OTTO, SEC. 32	OCEANA	1950	"BEREA"	1445	1 L		TRAVERSE	1895	1	0	0	1		120	4,308			10	430	0	0	0
		OTTO TWP., 13N-16W, SECTION 32																					
●	OVERISEL	ALLEGAN	1938	TRAVERSE	1478	3 L	42.1	TRENTON	4060	164	0	1	27	3	10,256	2,915,469			1770	1647	55	13	68
		OVERISEL TWP., 4N-14W, SECTIONS 5, 8, 9, 15, 16, 21, 22, 27, 28, 34; HEATH TWP., 3N-14W, SECTIONS 3, 4, 9, 10																					
⊕	OVERISEL	REFER TO TABLE 5 DEVELOPED GAS STORAGE RESERVOIRS																					
◐	OVERISEL, SEC. 11	ALLEGAN	1940	TRAVERSE	1553	4 L		TRAVERSE	1578	1	ABANDONED 1944					6,370			10	637			
		OVERISEL TWP., 4N-14W, SECTION 11																					
●	OXBOW	MASON	1958	TRAVERSE	1652	1 L	35.4	TRAVERSE	1660	4	0	1	3	1	2,137	83,666			40	2092	25	0	25
		RIVERTON TWP., 17N-17W, SECTIONS 26, 27																					
☼	PARADISE	GRAND TRAVERSE	1965	TRAVERSE	1889	8 L		DUNDEE	1897	3	0	0	3	3				0	400				
		PARADISE TWP., 25N-10W, SECTIONS 9, 16																					
☼	PARIS	MECOSTA	1951	MICHIGAN STRAY	1217	5 S		REED CITY	3545	2	0	0	1				5,988	373,372	560				
●			1949	TRAVERSE	2890	10 D	43.6			22	0	1	12		12,885	1,204,904			440	2738	552	*51	603
☒			1949	DUNDEE	3404	5 L				2	ABANDONED 1959							268,667	560				
		GREEN TWP., 16N-10W, SECTIONS 16, 21, 22, 27, 28																					
☼	PARTELLO	CALHOUN	1959	SALINA A-1 CARB.	3192	30 D		TRENTON-BLACK RIVER	4905	4	1	0	4	1			562,097	1,045,878	200				
		LEE TWP., 1S-5W, SECTIONS 12, 13																					
●	PAW PAW	VAN BUREN	1963	TRAVERSE	1096	2 L	41.4	TRAVERSE	1098	8	0	0	3	2	727	19,761			160	123	7	0	7
		PAW PAW TWP., 3S-14W, SECTIONS 2, 10, 11, 15																					
●	PAW PAW, SEC. 33	VAN BUREN	1964	TRAVERSE	1028	1 L	38.0	TRAVERSE	1032	1	0	0	1	1	0	0			10				
		PAW PAW TWP., 3S-14W, SECTION 33																					
●	PEACOCK	LAKE	1966	TRAVERSE	2292	2 L	34.0	REED CITY	3047	12	10	0	12		51,806	53,936			480	112	164	*50	214
●			1966	REED CITY	3001	4 D				1	0	0	1		1,270	2,330			40	58	0	1	1
		PEACOCK TWP., 19N-13W, SECTIONS 7, 9, 17, 18																					
●	PECKS LAKE	OSCEOLA	1967	DUNDEE	3866	2 L		REED CITY	3854	1	0	0	1	1	0	2,885			40	72			
		EVART TWP., 17N-8W, SECTION 18																					
●	PENTWATER	OCEANA-MASON	1948	TRAVERSE	1585	8 L	40.4	PRAIRIE DU CHIEN	5383	143	0	0	58	19					1400		2727	1	2728
●			1948	DUNDEE	2088	10 D	43.1								39,764	6,557,596		1,010,713	2000	1929			
										THE 58 WELLS INCLUDE 26 TRAVERSE, 13 DUNDEE AND 19 DUNDEE & TRAVERSE														
		WEARE TWP., 16N-17W, SECTIONS 4, 5, 6, 7, 8; PENTWATER TWP., 16N-18W, SECTIONS 1, 2, 12; SUMMIT TWP., 17N-17W, SECTION 31; SUMMIT TWP., 17N-18W, SECTIONS 26, 35, 36																					

TABLE 4 MICHIGAN OIL AND GAS FIELDS Continued

POOL CLASSIFICATION ● ACTIVE OIL FIELD OR POOL ◐ ABANDONED OIL FIELD OR POOL ☼ ACTIVE GAS FIELD OR POOL ☒ ABANDONED GAS FIELD OR POOL ⊕ GAS STORAGE RESERVOIR ⊖ UNDEVELOPED GAS STORAGE RESERVOIR

	FIELD NAME	COUNTY TOWNSHIP PRODUCING SECTIONS	YEAR OF DISC.	PRODUCING FORMATION OR POOL	PAY ZONE DEPTH IN FEET	PAY ZONE THICKNESS AND LITHOLOGY	PAY ZONE OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF OIL or GAS WELLS 1968 TO END	COMP. IN	ABAND. IN	PRODUCING AT END	SHUT IN OR SHUT DOWN	OIL PRODUCTION - BBLS. PRODUCED IN 1968	OIL PRODUCTION - BBLS. CUMULATIVE THROUGH 1968	GAS PRODUCTION - Mcf. PRODUCED IN 1968	GAS PRODUCTION - Mcf. CUMULATIVE THROUGH 1968	DRILLED ACRES	RECOVERY PER ACRE DRILLED (BBLS.)	BRINE PRODUCTION DISPOSAL SUBSURFACE	DISPOSAL SURFACE	TOTAL BBLS. PER DAY
●	PETERS	ST. CLAIR	1955	SALINA-NIAGARAN	2386	47 D	39.0	CLINTON	2842	89	0	2	82	10	254,577	3,890,346	1,290,223	12,092,611	2140	1818	582	0	582
		CASCO TWP., 4N-15E, SECTIONS S½ 15, SE¼ 16, 22, 23, 26, 27, E½ 28, NE¼ 33, N½ 34																					
●	PETERS, EAST	ST. CLAIR	1961	SALINA-NIAGARAN	2590	17 D	41.6	CLINTON	2777	9	0	0	8	COMBINED WITH PETERS							112	0	112
		CASCO TWP., 4N-15E, SECTIONS 24, 25; CHINA TWP., 4N-16E, SECTION 19																					
◐	PINCONNING	BAY	1958	TRAVERSE	2151	1 L		DETROIT RIVER	3790	1	ABANDONED 1960						PRODUCTION COMBINED WITH PINCONNING DUNDEE						
●			1944	DUNDEE	2898	7 D	36.2			12	0	0	2	1	4,763	855,958			100	8560	0	1	1
		PINCONNING TWP., 17N-4E, SECTIONS 25, 35, 36; FRASER TWP., 16N-4E, SECTION 2																					
◐	PINE	MONTCALM	1938	TRAVERSE	2836	1 L	45.0	DUNDEE	3308	2	ABANDONED 1963					105,506			20	5275			
		PINE TWP., 11N-8W, SECTION 29																					
◐	PINE RIVER	GRATIOT	1956	TRAVERSE	2890	5 L		DUNDEE	3285	1	ABANDONED 1958					760			10	76			
◐			1942	DUNDEE	3280	2 L				2	ABANDONED 1956					13,285			90	148			
		PINE RIVER TWP., 12N-3W, SECTION 31; SEVILLE TWP., 12N-4W, SECTION 36																					
☼	PINE, SECS. 9 & 17	MONTCALM	1951	MICHIGAN STRAY	1251	1 S		DUNDEE	3469	2	0	0	2					37,272	80		DOMESTIC USE		
		PINE TWP., 11N-8W, SECTIONS 9, 17																					
☼	PIONEER	MISSAUKEE	1931	TRAVERSE	3025	5 L		DUNDEE	3583	1	0	0	1	1				0	40	(Shut-in)			
		PIONEER TWP., 24N-7W, SECTION 24																					
◐	PIPESTONE	BERRIEN	1962	TRAVERSE	822	2 L	22.4	NIAGARAN	1353	2	ABANDONED 1966					85			20				
		PIPESTONE TWP., 5S-17W, SECTION 24																					
●	POLKTON	OTTAWA	1942	TRAVERSE	1878	2 L	37.8	DUNDEE	2351	13	0	1	5	1	2,718	60,601			170	356	0	2	2
		POLKTON TWP., 8N-14W, SECTIONS 8, 9, 10, 11, 14, 15, 16																					
●	PORTER	MIDLAND	1933	DUNDEE	3415	12 L	40.6	BLACK RIVER	9519	529	0	1	132	23	135,965	48,866,932		4,992,995	6690	7304	7768	1	7769
		PORTER TWP., 13N-1W, SECTIONS 7, 8, 9, 10, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 26, 27, 28; JASPER TWP., 13N-2W, SECTIONS 1, 2, 3, 11, 12; GREENDALE TWP., 14N-2W, SECTIONS 34, 35																					
◐	PORT HURON	ST. CLAIR	1886	DUNDEE	575	20 L		CAMBRIAN	4948	21	ABANDONED 1921				NO RECORD								
		FT. GRATIOT TWP., 7N-17E, SECTION 32																					
☼	PROSPER	MISSAUKEE	1948	MICHIGAN STRAY	1269	6 S		RICHFIELD	5254	3	0	0	2					152,882	480	(Lease Fuel Now)			
		AETNA TWP., 22N-6W, SECTIONS 34, 35; CLAM UNION TWP., 21N-6W, SECTION 2																					
●	PROSPER	MISSAUKEE	1942	DUNDEE	3837	4 L	43.2	RICHFIELD	5254	13	0	0	6		12,223	1,705,555			520	3280	2286	0	2286
◐			1954	RICHFIELD	5128	21 D				1	ABANDONED 1957					7,088			40	177			
		AETNA TWP., 22N-6W, SECTIONS 26, 35																					
●	PROSPER, SOUTH	MISSAUKEE	1967	DUNDEE	3798	8 D		DUNDEE	3808	4	1	0	4		74,141	80,110			160	500	250	0	250
		AETNA TWP., 22N-6W, SECTION 36; CLAM UNION TWP., 21N-6W, SECTIONS 1, 2																					
◐	PULLMAN	ALLEGAN	1949	TRAVERSE	1185	1 L		BASS ISLANDS	1942	9	ABANDONED 1951					26,840			90	298			
		CASCO TWP., 1N-16W, SECTIONS 11, 12																					
●	PULLMAN, EAST	ALLEGAN	1949	TRAVERSE	1131	2 L	39.0	TRENTON	3020	25	0	0	13		3,672	370,894			250	1484	163	5	168
☼			1961	SALINA A-2 CARB.	1645	7 D				3	0	3	0		ABANDONED 1968			27,225	480				
		LEE TWP., 1N-15W, SECTIONS 5, 6, 7, 8 (Traverse), SECTIONS 5, 6, 8 (Salina A-2 Carb.)																					
☼	PUTTYGUT	ST. CLAIR	1960	SALINA-NIAGARAN	2423	60 D		NIAGARAN	2774	14	0	0	14	1			402,566	8,788,677	440		7	0	7
		CASCO TWP., 4N-15E, SECTIONS 11, 14, 15													(Oil Production Combined with Adair)								